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The Transsexual Phenomenon

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Part 1

Preface and Acknowledgements

There is a challenge as well as a handicap in writing a book on a subject that is not yet covered in the medical literature. Transsexualism is such a subject.

The handicap lies in the absence of all previous observations to which to compare one's own, and which would thus allow a more meaningful appraisal of the entire problem.

The challenge lies in the novelty of these observations and in the attempt to describe clinical pictures and events without preconceived notions, with no axes to grind, and with no favorites to play. Conclusions, therefore, are "untainted," growing out of direct observance.

As one who is neither surgeon nor psychiatrist - but rather as a student of sexological problems, and also as a long-time practitioner in sexology - I feel myself to be in a good position for the necessary objectivity.

There exists a relatively small group of people - men more often than women - who want to "change their sex." This phenomenon has

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occasionally been described in its principal symptoms by psychiatrists and psychologists in the past; but a deeper awareness of the problem, and especially its general sexological as well as its therapeutic implications, was largely neglected, at least in the United States. It has been considered only during the last (roughly) thirteen years and then with much hesitation.

The case of Christine Jorgensen focused attention on the problem as never before. Without her courage and determination, undoubtedly springing from a force deep inside her, transsexualism might be still unknown - certainly unknown by this term - and might still be considered to be something barely on the fringe of medical science. To the detriment if not to the desperation of the respective patients, the medical profession would most likely still be ignorant of the subject and still be ignoring its manifestations. Even at present, any attempts to treat these patients with some permissiveness in the direction of their wishes - that is to say, "change of sex" - is often met with raised medical eyebrows, and sometimes even with arrogant rejection and/or condemnation.

And so, without Christine Jorgensen and the unsought publicity of her "conversion," this book could hardly have been conceived.

If credit, therefore, goes to her (and to a few other pioneer patients who made their experiences known in the United States and in England), so it must also go to those courageous and compassionate Danish physicians who, for the first time, dared to violate the tabu of a supposedly inviolate sex and gender concept, and who pubilshed their findings in the Journal of the American Medical Association.[1] Furthermore, being true physicians, they considered the patient's interest before they thought of possible criticism by their colleagues.

This criticism was not long in coming. New and rather revolutionary medical and surgical procedures readily found their opponents, especially since sex was involved. Such a contretemps, however, is no novelty in the history of medicine.

Conservatism and caution are most commendable traits in governing the progress of science in general, and of medicine in particular. Only when conservatism becomes unchanging and rigid and when caution deteriorates into mere self-interest do they become negative forces, retarding, blocking, and preventing progress, neither to the benefit of science nor to that of the patient. More power, therefore, to those brave and true scientists, surgeons, and doctors who let the patient's interest and their own conscience be their sole guides.

When I decided to write this book, with the principal objective of describing my own clinical observations of the past decade, I was well

aware that I would meet opposition in various quarters and by no means only the medical. Breaking a tabu always stirs quick emotions, although attempts to rationalize may follow. How great this tabu is that aims to protect man's sex or gender was for the first time well emphasized by Johann Burchard, psychiatrist at the University of Hamburg.

The forces of nature, however, know nothing of this tabu, and facts remain facts. Intersexes exist, in body as well as in mind. I have seen too many transsexual patients to let their picture and their suffering be obscured by uninformed albeit honest opposition. Furthermore, I felt that after fifty years in the practice of medicine, and in the evening of life, I need not be too concerned with a disapproval that touches much more on morals than on science.

Nevertheless, encouragement was needed. That came, directly or indirectly, from those doctors and friends, here and abroad, who themselves had observed the transsexual phenomenon in some patients and had formed an independent opinion. To these unnamed supporters go my heartfelt thanks; so also to my collaborators in this volume, science writer Dr. G. B. Lal, psychiatrist Dr. Richard Green, and sexologist-writer R. E. L. Masters. And not least to the publisher Mr. Arthur Ceppos, president of the Julian Press. Likewise to my associate Dr. Leo Wollman, surgeon-gynecologist, for his editorial advice in technical matters. Also to my friend Dr. Wardell Pomeroy for his frequent valuable assistance, as well as to Mr. Richard D. Levidow, New York attorney-at-law, for checking the accuracy of the chapter on legal aspects.

My sincere appreciation goes also to Dr. Robert W. Laidlaw and Dr. Johannes Burchard, psychiatrists, and to editor Mr. Brooking Tatum for their encouragement and interest in this book.

Indirect encouragement came unexpectedly when Mr. Reed Erickson, chairman of the Erickson Educational Foundation, offered me a grant for three years to conduct research in transvestism and transsexualism. This research has been in progress for only a short time and is, therefore, not included in the present book; however, it has given welcome moral support to its writing. My sincere thanks to Mr. Erickson for this support, and also to all my collaborators who are taking an active part in this research. Let us hope their names will soon appear in coming publications, publications that may well modify, change, supplement, or confirm statements in the chapters that are to follow.

Can an author ever appreciate sufficiently what a competent secretary can do in taking care of such matters as extracting essential scientific data from medical records, tabulating them, and arranging them so

that they become useful? Hardly. Here I can only thank Mrs. Robert Allen, the understanding and much admired Virginia of my office staff, for her help in this aspect of the book's preparation: for her devotion to the work and for her intelligent, efficient cooperation.

My thanks must also go to Mrs. Rhoda Sapiro in New York and to Miss Maureen Maloney in San Francisco for their ever-ready and valuable assistance in many ways.

Harry Benjamin
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The Symphony of Sexes

There is hardly a word in the English language comparable to the word "sex" in its vagueness and in its emotional content. It seems definite (male or female) and yet is indefinite (as we will see). The more sex is studied in its nature and implications, the more it loses an exact scientific meaning. The anatomical structures, so sacred to many, come nearer and nearer to being dethroned. Only the social and legal significances of sex emerge and remain.

According to the dictionary, sex is synonymous with gender. But, in actuality, this is not true. It will become apparent in the following pages that "sex" is more applicable where there is the implication of sexuality, of libido, and of sexual activity. "Gender" is the nonsexual side of sex. As someone once expressed it: Gender is located above, and sex below the belt. This differentiation, however, cannot always be very sharp or constant and therefore, to avoid pedantry, sex and gender must, here and there, be used interchangeably.

With the advancement of biologic and especially of genetic studies, the concept of "male" and "female" has become rather uncertain. There is no longer an absolute division (dichotomy). The dominant status of the genital organs for the determination of one's sex has been shaken, at least in the world of science.

Furthermore, there is also the psychological reaction to sex, which is widely different in different individuals. It means one thing to an objective scientist, for instance such a man as Kinsey. It means an entirely different thing to a fanatical and antisexual crusader such as Comstock. A Brigitte Bardot will look at sex in her own way, and so will the courtesan. The average citizen may not identify himself or herself with any of these interpretations but will have his or her own concepts and ideas as to what sex means or should mean.

The biologist, the medical man and clinician, the psychologist, the jurist, the sociologist, and finally the priest and theologian are all apt to view and study sex from different angles and in different lights. In some instances, sex means gender; in others, it means sexuality, sex relations, and, occasionally, "vice" or something "obscene" and pornographic.

The object and purpose of sexual relations varies with various persons and under various circumstances. In the animal world, the sex urge is the instrument for procreation. Animals fornicate instinctively for that purpose only. Humans do not do so as a rule. Yet the Roman Catholic Church would want just that: sex relations for the same purpose in man as in animals, procreation only. But most individuals seek pleasure in sex or at least seek relief from unpleasant tensions. More and more persons realize that sex serves recreation as well as procreation. But such is rarely admitted and rarely taught in any schools, including medical schools. Sexology as a branch of medicine is still rather widely ignored in formal medical education, to the great disadvantage of the young doctor and his future patients.

For the simple man in the street, there are only two sexes. A person is either male or female, Adam or Eve. With more learning comes more doubt. The more sophisticated realize that every Adam contains elements of Eve and every Eve harbors traces of Adam, physically as well as psychologically.

The better educated person knows of the existence of intersexes, of true and of pseudohermaphrodites in whom the physical sex is in doubt. He is also acquainted with homosexuality, bisexuality, and transvestism, all revealing a disturbed, doubtful, confused, and uncertain manifestation of sex.

Here must be added the picture of the immature sexuality, the sexuality of the child (polymorph perverse, in psychoanalytic terminology), some of which frequently persists into adulthood and then may give rise to homo- and bisexuality, to all kinds of deviations, such as sadomasochism and the often bizarre forms of various fetishisms. Some individuals do "get stuck" in their infantile sexuality.

Aside from such diversity of the expression of the sex urge, there is another more basic multiformity rarely considered except by research scientists, but highly essential for the subject of this book. The reference is to the various kinds of sex that can be identified and separated, in spite of overlapping and interaction.

Ordinarily, the purpose of scientific investigation is to bring more clarity, more light into fields of obscurity. Modern researches, however, delving into "the riddle of sex," have actually produced - so

far - more obscurity, more complexity. Instead of the conventional two sexes with their anatomical differences, there may be up to ten or more separate concepts and manifestations of sex and each could be of vital importance to the individual. Here are some of the kinds of sex I have in mind: chromosomal, genetic, anatomical, legal, gonadal, germinal, endocrine (hormonal), psychological and - also - the social sex, usually based on the sex of rearing.

The chromosomal sex, rather loosely equated with the genetic sex, is the fundamental one and is to be considered first. It determines both sex and gender.

At the moment of conception, when fertilization takes place, and when the father's sperm cell enters the mother's egg, the sex of the future child is decided upon. If the father's sperm happened to carry a Y chromosome (and approximately half of them do), the fetus will - normally - develop male sex organs and a boy will be born. If it contained an X chromosome, the normal development will provide female sex organs for the fetus, resulting in the birth of a girl.

The mother's egg cell always carries an X chromosome and therefore the normal male chromosomal constellation is XY; the normal female, XX. In rare cases, various imperfectly understood abnormalities may occur and constellations of XXY, XXYY, even to XXXXY, and so on, have been observed with more or less severe defects in the physical as well as the mental structure of the child. Some of these patterns have been aptly described as a "mosaic" of sex. According to recent investigations, it seems that the more severe the chromosomal abnormalities are (for instance, the more X chromosomes are found), the more marked are mental retardation, testicular cell distortion, and genital as well as skeletal disorders.[2]

The pattern of the sex chromosomes, the so-called sex determinants, remains frozen in every body cell including blood cells. The true sex of an individual can therefore be diagnosed from these cell structures, usually taken for microscopic examination from the skin, the mucous membranes of the mouth, or the blood.

It is not always necessary to make a complete study of the (normally 46) chromosomes (a so-called karyotype) to arrive at the diagnosis of an individual'ò s true sex. The scientist can also - more simply although less revealingly - look for the so-called sex-chromatin body in the cell structure. If it is found, the individual is female. Males are "chromatin negative." A subdivision of the "chromosomal sex" can therefore be the "chromatin sex."

A great deal has yet to be learned about the genetic sex and until more is known, it may be well to keep an open mind as to the possible

causes of some mental abnormalities and sex deviations. At present, they are mostly ascribed to psychological conditioning; but they may yet find an additional explanation in some still obscure genetic fault, perhaps as a predisposing factor for later environmental influences.

Barring accidents during gestation which could bring about hermaphroditic deformities, the newborn boy or girl will reveal the sex through the presence or absence of primary and secondary genital organs. The testes (and the ovaries) are "primary" because they are directly concerned with reproduction. The secondary organs of the male are the penis, scrotum, prostate, masculine hair distribution, a deeper voice, and so on, and a masculine psychology (such as aggressiveness, self assurance, and related traits). All these are further developed and maintained by the testicular hormone called androgen. The secondary female characteristics are the clitoris, vulva, uterus (with its menstrual function), vagina, breasts, a wide pelvis, female voice, female hair distribution, and the usual feminine mental traits (shyness, compliance, emotionalism, and others.)[3]

Both together, the primary and the secondary sex characters, constitute another, the second "kind of sex," the anatomical (or morphological) sex.

Again a subdivision may be recognized as the genital sex or the gonadal sex, gonad being the collective term for the testes and ovaries.

This genital sex, in everyday thought or language, decides who is a man and who is a woman. The visible sex organs indeed provide the simplest way of differentiation, of which an unwritten law takes advantage. The genital sex in this way becomes another kind of sex: the legal sex, actually not defined in legal codes, yet employed in everyday practice.

In this area, errors of sex can occur and are not too infrequent. The obstetrician or the midwife may be deceived. Usually they take only a quick look at the newborn baby and congratulate the parents on a boy or a girl. But they may have made a mistake. Hermaphroditic or - much more frequently - pseudohermaphroditic deformities may have escaped them, or the organs may be so incompletely developed, "unfinished" (as John Money calls it), or the testes undescended, that the observer was misled. In this way the so-called nursery sex was not the true sex. Consequently the legal sex was wrong too and complications may loom large for the future.

We spoke of the gonadal sex which, however, on closer examination must be divided into two varieties because the gonads have two separate functions. They produce the germ cells and they secrete

hormones. And so we have the germinal sex and the endocrine (or hormonal) sex.

The germinal sex serves procreation only. The normal testis produces sperm and where there is sperm, there is maleness. The normal ovary produces eggs (ova) and where they are found, there is femaleness.

But male- or female-ness does not mean masculinity or femininity. These are different concepts, the former referring to "sex" and the latter to "gender." They take in the entire personality. The masculine man and the feminine woman are primarily inherited qualities, but to a large extent they are also the products of the endocrine sex. The abundant supply of androgen in a male would tend to make him more virile, a "he-man," and the rich production of estrogen would insure - at least to some extent - the soft and lovely femininity of the typical woman (I am referring here mainly to physical characteristics. Many psychological ones can be acquired).

The endocrine sex, however, is not linked to the sex glands only. Other glands too supply hormones essential for both sexes to maintain their sex status. Without normal pituitary activity, the endocrine function of the gonads could suffer. Without normal adrenal function, a man is said to lose more of his androgen supply than if be lost his testes, that is, were castrated. This theory, however, based on laboratory work, does not fit the clinical picture and may have to be revised. Just as the anatomical sex is never entirely male or female (one must recall the existence of nipples in men and of a rudimentary penis, the clitoris, in women), so is the endocrine sex "mixed" to an even greater extent. Testes as well as the male adrenals produce small amounts of estrogen. Androgen, in more or less distinct traces, can be found in the ovaries and in larger amounts in the adrenals of females. Their metabolic end-products can be identified and measured in the blood as well as in the urine.

Therefore it can well be said that, actually, we are all "intersexes," anatomically as well as endocrinologically. But we are male or female in the anatomical or endocrine sense, according to the predominant structures or hormones.

The diverse amounts of both sex hormones in both sexes can have their influence on appearance as well as behavior, the appearance, however, largely determined by the genetic constitution, the behavior also by environmental and educational factors.

Consequently, the treatment with hormonal products (or surgical procedures) can make more or less distinct impressions on the endocrine sex, feminizing a male and masculinizing a female. This is an example of how one of the various "kinds of sex" can be

deliberately altered. None of them is fixed and unchangeable except the inherited, genetic sex.

Even more flexible than any other is the next and highly important psychological sex. It may be in opposition to all other sexes. Great problems arise for those unfortunate persons in whom this occurs. Their lives are often tragic and the bulk of all the following pages will be filled with the nature of their misfortunes, their symptoms, their fate, and possible salvation.

Many psychiatrists, and especially psychoanalysts, ascribe to early childhood conditioning in an environment unfavorable for a normal healthy development the plight of such patients, who feel that their minds and their souls are "trapped" in the wrong bodies. More will have to be said about this theory. It may suffice to say here that equally unfavorable childhood influences can be traced back in persons who later grew into perfectly normal adulthood with no apparent split between the psychological and the physical sex. Therefore a constitutional factor must be at work (besides the events of childhood) that is a source of the future mental state.

The most striking among these sex-split personalities are the transsexuals. Their problems are intertwined with those of transvestites and also of homosexuals, as we will see in later chapters.

Transsexuals, who want to belong to the opposite sex, and transvestites, who only "cross-dress" in their clothes, sometimes live, quite unrecognized, as members of the sex or gender that is not theirs organically. In these cases, the psychological sex determines the social sex, which otherwise follows the sex of assignment at birth, and the sex of rearing in childhood, both based on the anatomical (and legal) sex. These are normally the kinds of sex in which a person dresses and finds his or her place in the world.

In the vast majority of all people, these latter sexes as well as the psychological sex blend harmoniously with all the other kinds of sex.

To summarize and conclude this introduction: The normal male (normal by his genetic inheritance) has his masculine build and voice, an ample supply of androgen, satisfactory potency, a sperm count that assures fertility, feels himself to be a man, is sexually attracted to women, and would be horrified to wear female clothes or "change his sex." He is often husband and father, works in a job or profession in accord with his sex and gender that is never questioned legally or socially.

The genetically normal female presents the opposite picture. She feels, looks, acts, and functions as a woman, wants to be nothing else,

usually marries and has children. She dresses and makes up to be attractive to men and her sex and gender are never doubted either by society or by the law.

Such more or less perfect symphony of the sexes is the rule. Yet, disturbances may occur more often than is usually assumed. Unfortunately, our conventions and our laws have no understanding, no tolerance for those in whom nature or life (nature or nurture) have created a dissonance in their sexuality. Such individuals are frequently condemned and ostracized. Among them we find transsexuals, transvestites, eunuchoids, homosexuals, bisexuals, and other deviates. These latter, however, are not under consideration here.

In rare cases and often against great odds, defying tradition and orthodoxy (not least in the medical profession), some of them, particularly transsexuals, may succeed in "changing their sex" and find a degree of happiness that our present society denies them.

Our sexuality has to be without fault. It must function in strict conformity with customs and laws, no matter how illogical they may be and to how much hypocrisy they may give rise.

Any interference with the sacrosanct stability of our sex is one of the great tabus of our time. Therefore, its violation is strongly resented with emotions likely to run high, even among doctors. Much of this will appear in the chapters that are to follow.

Transvestism, Transsexualism, and Homosexuality

A general survey with an attempt to define, diagnose, and classify

Transvestism (TVism) as a medical diagnosis was probably used for the first time by the German sexologist, Dr. Magnus Hirschfeld, about forty years ago when he published his book, Die Transvestiten. The term is now well known in the sexological literature, indicating the desire of some individuals - men much more often than women - to dress in the clothes of the opposite sex. It is, therefore, also described as "cross-dressing."

Most writers on the subject refer to transvestism as a sexual deviation, sometimes as a perversion. It is not necessarily either one. It also can be a result of "gender discomfort" and provide a purely emotional

relief and enjoyment without conscious sexual stimulation, this usually occurring only in later life.

Hirschfeld and his pupils saw many of these persons in his Institute of Sexual Science in Berlin, Germany. This memorable Institute with its famous and rich museum and its clinic and lecture hall (Haeckel Saal) was destroyed by the Nazis rather early in their march to power (1933). (This destruction occurred soon after the first and only issue of Sexus, an international sexological magazine, was published by Hirschfeld while he was away from Germany.) The Institute's confidential files were said to have contained too many data on prominent Nazis, former patients of Hirschfeld, to allow the constant threat of discovery to persist.

Many times in the 1920's, I visited Hirschfeld and his Institute. Among other patients, I also saw transvestites who were there, rarely to be treated, but usually, with Hirschfeld's help, to procure permission from the Berlin Police Department to dress in female attire and so appear in public. In the majority of cases, this permission was granted because these patients had no intention of committing a crime through "masquerading" or "impersonating." "Dressing" was considered beneficial to their mental health.

Havelock Ellis proposed the term "eonism" for the same condition, named after the Chevalier d'Eon de Beaumont, a well-known transvestite at the court of Louis XV. In this way, Ellis wanted to bring the term into accord with sadism and masochism, also named after the most famous exponents of the respective deviations, the French Marquis (later Count) Donatien de Sade, and the Austrian writer, Leopold von Sacher-Masoch.

Because of the much more permissive fashions among women, and for other reasons, the problem of transvestism almost exclusively concerns men in whom the desire to cross-dress is often combined with other deviations, particularly with fetishism, narcissism, and the desire to be tied up (bondage) or somehow humiliated (masochism).

Transvestism versus transsexualism

Transvestism (TVism) is a rather frequent occurrence, although it would be impossible to say how many transvestites (TVs) there are, for instance, in the United States. From students of the subject (TVs themselves) I have received estimates ranging from ten thousand to one million. Many transvestites are unknown as such, indulging in their hobby in the privacy of their homes, known perhaps only to their closest relatives, sometimes only to their wives. Others are most attracted to going out "dressed" in order to be accepted as women in

public by strangers. They may invite discovery and arrest, but this danger is an additional attraction for some of them. Others may live completely as women, their true status sometimes discovered only after death.

The majority of transvestites are overtly heterosexual, but many may be latent bisexuals. They "feel" as men and know that they are men, marry, and often raise families. A few of them, however, especially when they are "dressed," can as part of their female role react homosexually to the attentions of an unsuspecting normal man. The transvestite's marriage is frequently endangered as only relatively few wives can tolerate seeing their husbands in female attire. The average heterosexual woman wants a man for a husband, not someone who looks like a woman; but mutual concessions have often enough preserved such marriages, mostly for the sake of children.

It is not the object of this book to deal in detail with transvestism (TVism) in all its aspects. The object is to deal with transsexualism (TSism) principally. Yet, an extra chapter on TVism with further characterizations will have to be inserted in order to let the picture of transsexualism emerge more clearly. Repetitions will be unavoidable; but the relative unfamiliarity with the subject, even in the medical profession, may make those repetitions permissible, if not desirable.

The transsexual (TS) male or female is deeply unhappy as a member of the sex (or gender) to which he or she was assigned by the anatomical structure of the body, particularly the genitals. To avoid misunderstanding: this has nothing to do with hermaphroditism. The transsexual is physically normal (although occasionally underdeveloped). These persons can somewhat appease their unhappiness by dressing in the clothes of the opposite sex, that is to say, by cross-dressing, and they are, therefore, transvestites too. But while "dressing" would satisfy the true transvestite (who is content with his morphological sex), it is only incidental and not more than a partial or temporary help to the transsexual. True transsexuals feel that they belong to the other sex, they want to be and function as members of the opposite sex, not only to appear as such. For them, their sex organs, the primary (testes) as well as the secondary (penis and others) are disgusting deformities that must be changed by the surgeon's knife. This attitude appears to be the chief differential diagnostic point between the two syndromes (sets of symptoms) - that is, those of transvestism and transsexualism.

The transvestite (TV) usually wants to be left alone. He requests nothing from the medical profession, unless he wants a psychiatrist to try to cure him. The transsexual (TS), however, puts all his faith and future into the hands of the doctor, particularly the surgeon. These patients want to undergo corrective surgery, a so-called "conversion

operation," so that their bodies would at least resemble those of the sex to which they feel they belong and to which they ardently want to belong.

The desire to change sex has been known to psychologists for a long time. Such patients were rare. Their abnormality has been described in scientific journals in the past in various ways; for instance, as "total sexual inversion," or "sex role inversion." Beyond some attempts with psychotherapy in a (futile) effort to cure them of their strange desires, nothing was or could be done for them medically. Some of them probably languished in mental institutions, some in prisons, and the majority as miserable, unhappy members of the community, unless they committed suicide. Only because of the recent great advances in endocrinology and surgical techniques has the picture changed.

The Jorgensen case

One of the first to take advantage of these advances was a very unhappy young American photographer and ex-G.I. by the name of George Jorgensen. He pursued his desire for a "sex change" with remarkable perseverance and was fortunate enough to find in his family's homeland, Denmark, physicians of compassion, scientific objectivity, and courage to help him. And so, an unknown George Jorgensen became the world-famous Christine Jorgensen, not the first to undergo such surgery, but the first whose transformation was publicized so widely that the news of this therapeutic possibility spread to the farthest corners of the earth.

The facts of her case, which she herself related with good insight and restraint - unfortunately only in a magazine article - caused emotions to run high among those similarly affected. Suddenly they understood and "found" themselves and saw hope for a release from an unhappy existence. Among the public, there was praise for Christine for the courage of her convictions; also there was disbelief with criticism of her physicians, as well as outright condemnation on moral grounds. Such emotional reactions in lay circles reached the height of absurdity and bigotry when Christine was once barred from a New York restaurant and night club as a guest.

Physicians, including psychiatrists, were divided in their opinions, but the conservative Journal of the American Medical Association published an article written by Christine Jorgensen's group of Danish physicians, headed by the noted scientist and endocrinologist, Christian Hamburger, in which the Jorgensen case (or a parallel one) was fully described as to history, nature, and treatment, including surgery. Nevertheless, many physicians were critical of the use of any treatment other than psychotherapy in a condition apparently of a

psychopathological nature. This was especially true of psychoanalysts. Other physicians, not too well versed in sex problems, confused transsexualism with homosexuality. "Oh, just another fairy," one commented to me when speaking of the Jorgensen case.

For a reasonably normal man or woman, it is almost inconceivable that anyone should want to change the sex or gender into which he or she was born, especially by such radical means as major surgery. Therefore, it is extremely difficult for a transsexual to find understanding, sympathy and, most of all, empathy. Yet, so strong is the desire that self-mutilations are no rarity, and how often a mysterious suicide is due to the utter misery of a transsexual is anybody's guess.

The term transsexualism and synonyms

Following the sensational Jorgensen publicity in 1952, I was asked to write an article on the subject for the now no longer existing International Journal of Sexology. In this article, which appeared in August 1953, 1 chose the term transsexualism for this almost unknown syndrome. I did the same in a lecture (as part of a symposium) at the New York Academy of Medicine, before the Association for the Advancement of Psychotherapy in December, 1953, discussing male transsexualism only. (The person so afflicted is best referred to as a "transsexual," a simpler term than "transsexualist," which is also used and which, unfortunately, I myself used in the beginning).

Dr. Van Emde Boas of Amsterdam prefers to call such patients "transexists," which is shorter but a bit of a twister for the American tongue; and Dr. John Money of Johns Hopkins University has written aptly of "contra-sexism" which, however, ignores the transformation urge. Hamburger and his associates spoke of the transsexual urge as "genuine transvestism" or "eonism."

The late Dr. David O. Cauldwell had, in 1949, described in Sexology Magazine the strange case of a girl who wanted to be a man and called the condition "Psychopathia transsexualis." Dr. Daniel C. Brown speaks of transsexualism as a term related to "Sex role inversion," specifically meaning that this type of invert wants or receives surgical alteration of his genitals. He uses "inversion" as the widest term with transvestism, transsexualism, and homosexuality "expected to accompany most cases of inversion." So much for the terms and its synonyms.

In the years following the Hamburger et al. publication in the A.M.A. Journal and my own in the American Journal of Psychotherapy in 1954

(constituting the lecture of the previous year) there were hardly any references to transsexualism, in the American medical literature. The clinical material that I was able to accumulate grew steadily. In October 1963, I was invited to report my clinical experiences at New York University School of Medicine. This lecture was published nearly a year later in the Western Journal of Surgery, Obstetrics and Gynecology (March-April 1964). Two other lectures followed in quick succession, one at an annual conference of the Society for the Scientific Study of Sex (November 1963) , and another one at the Jacobi Hospital of the Albert Einstein College of Medicine (April 1964). This brings the history of my own work fairly well up to date.

The use of "transsexualism" (sometimes called "transsexuality") seems to have caught on in the international medical literature of recent years. It is applied to both sexes but until the much rarer female transsexual receives attention in a separate chapter, the following will from now on deal with the male almost exclusively.

Sex role disorientation

The relationship between transvestism (TVism) and transsexualism (TSism) deserves further scrutiny and reflection. Both can be considered symptoms or syndromes of the same underlying psychopathological condition, that of a sex or gender role disorientation and indecision. Transvestism is the minor though the more frequent, transsexualism the much more serious although rarer disorder.

Cross-dressing exists (with few exceptions) in practically all transsexuals, while transsexual desires are not evident (although possibly latent) in most transvestites. It seems to depend upon how deeply and for what congenital or acquired reasons the sex and gender orientation is disturbed, whether the clinical picture of transvestism or transsexualism will emerge. The picture of TSism may first appear to be merely TVism, but whether this indicates a progressive character is by no means certain. (See chapter 4, "The Male Transsexual").

Definitions and classifications

In previous medical publications, I have divided all transvestites into three groups according to the clinical picture they presented. First there are those who merely want to "dress," go out "dressed," and to be accepted as women. They want to be allowed to do so. Their clash is with society and the law. Most of them feel, live, and work as men and lead normal, heterosexual lives, often as husbands and fathers.

Group 2 constitutes a more severe stage of an emotional disturbance. It could be interpreted as an intermediate stage between transvestism and transsexualism. These patients may waver in their emotions between the two. They need more than merely "dressing" to appease their psychological sex with its commanding and demanding female component. They want to experience some physical changes, bringing their bodies closer to that of the female, although they do shy away from surgery and the alteration of their genitalia. Such a desire, however, can play a part in their fantasies and daydreams. Like those of Group 1, for them the penis is still an organ of pleasure, in most cases for masturbation only. They crave some degree of gynecomastia (breast development) with the help of hormone medication, which affords them an enormous emotional relief. Psychotherapy is indicated but the patients frequently refuse it or fail to benefit from it. Their clash is not only with society and the law, but also with the medical profession. Relatively few doctors are familiar with their problems; most doctors do not know what to do for them except to reject them as patients or to send them to psychiatrists as "Mental cases."

This clash with society, the law, and the medical profession is still more pronounced and tragic in Group 3, which constitutes fully developed transsexualism. The transsexual shows a much greater degree of sex and gender role disorientation and a much deeper emotional disturbance. To him, his sex organs are sources of disgust and hate. So are his male body forms, hair distribution, masculine habits, male dress, and male sexuality. He lives only for the day when his "female soul" is no longer being outraged by his male body, when he can function as a female - socially, legally, and sexually. In the meantime, he is often asexual or masturbates on occasion, imagining himself to be female.

This, very briefly, is the clinical picture of the three groups as they appeared to me originally during the observation of over two hundred such patients. More than half of them were diagnosed as transsexuals (TSs).

The above interpretation, that is to say, transvestism as the mildest and transsexualism as the most severe disturbance of sex and gender orientation, seems to be practical and to fit the facts. Lukianowicz and Burchard, an English and a German psychiatrist, respectively, are in general agreement with this view. But there are other concepts that deserve consideration and should be outlined.

Sex object choice

Some investigators believe that the two conditions, TVism and TSism, should be sharply separated, principally on the basis of their "sex feel" and their chosen sex partners (object choices). The transvestite - they

say - is a man, feels himself to be one, is heterosexual, and merely wants to dress as a woman. The transsexual feels himself to be a woman ("trapped in a man's body") and is attracted to men. This makes him a homosexual provided his sex is diagnosed from the state of his body. But he, diagnosing himself in accordance with his female psychological sex, considers his sexual desire for a man to be heterosexual, that is, normal.

The choice of a sex partner is changeable. A number of transvestites are bisexual. As men, they can be attracted by women. When "dressed," they could be aroused by men. Chance meetings can be decisive. The statements of these patients cannot always be relied upon. They want to act within the conventions, or at least want to appear to do so. They may claim heterosexuality when actually they have more homosexual tendencies, which they suppress or simply do not admit. Some feel sufficiently guilty as TVs without wanting to confess to homosexual tendencies besides. Some do admit that heterosexual relations are possible with recourse to fantasies only. (In this way, transsexuals explain their marriages and parenthood and this explanation is most likely correct.)

When first interviewed, the patient may appear to be a TV of the first or second group. He often hesitates to reveal his wish for a sex change right away. Only after closer contact has been establisbed and confidence gained does the true nature of his deviation gradually emerge. Such seeming "progression" was observed in five or six out of my 152 transsexual patients, on whom I am reporting in this volume.

The opposite is rare but I have seen it happen. The apparent transvestite, or even transsexual, under treatment or - more likely - through outside influence (meeting the right girl) - turns toward heterosexuality and "normal" life. For how long is always the question.

Are all transvestites transsexuals?

Coming back to the differences between transvestism and transsexualism., another simpler and more unifying concept and a corresponding definition may have to be considered. That is, that transvestites with their more or less pronounced sex and gender indecision may actually all be transsexuals, but in varying degrees of intensity.

A low degree of largely unconscious transsexualism can be appeased through cross-dressing and demands no other therapy for emotional comfort. These are transvestites (Group 1).

A medium degree of transsexualism makes greater demands in order to restore or maintain an emotional balance. The identification with the female cannot be satisfied by wearing her clothes alone. Some physical changes, especially breast development, are requirements for easing the emotional tension. Some of these pa

tients waver between transvestitic indulgences and transsexual demands for transformation (Group 2).

For patients of a high degree of transsexualism (the "true and full-fledged transsexual"), a conversion operation is the all-consuming urge, as mentioned earlier and as a later chapter will show still more fully. Cross-dressing is an insufficient help, as aspirin for a brain tumor headache would be (Group 3).

It must be left to further observations and investigations in greater depth to decide whether or not transvestitic desires may really be transsexual in nature and origin. Many probably are, but the frequent fetishistic transvestites may have to be excluded.

If these attempts to define and classify the transvestite and the transsexual appear vague and unsatisfactory, it is because a sharp and scientific separation of the two syndromes is not possible. We have as yet no objective diagnostic methods at our disposal to differentiate between the two. We - often - have to take the statement of an emotionally disturbed individual, whose attitude may change like a mood or who is inclined to tell the doctor what he believes the doctor wants to hear. Furthermore, nature does not abide by rigid systems. The vicissitudes of life and love cause ebbs and flows in the emotions so that fixed boundaries cannot be drawn.

It is true that the request for a conversion operation is typical only for the transsexual and can actually serve as definition. It is also true that the transvestite looks at his sex organ as an organ of pleasure, while the transsexual turns from it in disgust. Yet, even this is not clearly defined in every instance and no two cases are ever alike. An overlapping and blurring of types or groups is certainly frequent.

Sex orientation scale (S.O.S.)

As a working hypothesis, but with good practical uses, the accompanying should illustrate six different types of the transvestism-transsexualism syndrome as clinical observations seem to reveal them. While there are six types, there are seven categories listed on the scale, the first one describing the average, normal person. The seven categories were suggested by the Kinsey Scale (K.S.) and could be described as the Sex Orientation Scale (S.O.S.).

To remind the reader, the Kinsey Scale was introduced in Kinsey, Pomeroy, and Martin's monumental Sexual Behavior in the Human Male as an ingenious rating scale between hetero- and homosexuality, a continuum of human sexual behavior, allowing any number of intermediate stages between complete hetero- and complete homosexuality. The Kinsey Scale reduces them to seven, from zero to six. A zero would be an exclusively heterosexual man or woman, a six an equally exclusive homosexual. A three would be a bisexual person who can be sexually aroused, equally, by members of either sex. The other figures (one, two, four, and five) indicate and diagnose the respective intermediate stages.

The Sex Orientation Scale (S.O.S.) likewise lists seven categories or types (not necessarily stages), the zero, however, separately, as it would apply to any person of normal sex and gender orientation for whom ideas of "dressing" or sex change are completely foreign and definitely unpleasant, whether that person is hetero-, bi-, or homosexual. It must be emphasized again that the remaining six types are not and never can be sharply separated. The clinical pictures are approximations, schematized and idealized, so that the TV and TS who may look for himself among the types will find his own picture usually in between two recorded categories, his principal characteristics listed in both adjoining columns. Type I, Type II, and Type III would belong to the original Group 1. Type IV would be Group 2 and Types V and VI would equal Group 3, as the accompanying Table 2 shows.

The following chapters will make use of the types from I to VI in relating case histories and in establishing a diagnosis of the respective patients. Referring to Table i will then enable the reader to get a somewhat clearer picture of the particular individual and his or her problem. It should be noted again, however, that most patients would fall in between two types and may even have this or that symptom of still another type.

TABLE 2		
Group 1	Type I	Pseudo TV
	Type II	Fetishistic TV
	Type III	True TV
Group 2	Type IV	TS, Nonsurgical
Group 3	Type V	TS, Moderate intensity
	Type VI	TS, High intensity

It has been the intention here to point out the possibility of several conceptions and classifications of the transvestitic and the transsexual phenomenon. Future studies and observations may decide which one is likely to come closest to the truth and in this way a possible understanding of the etiology may be gained. If this etiology should ever be established through future researches, classifications may have to be modified accordingly. In the meantime, the S.O.S. may serve a pragmatic and diagnostic purpose.

Relationship to homosexuality

The term "homosexuality" has never impressed me as very fortunate. It indicates an exclusiveness and a finality that exists in only a relatively small group of men, those who are entirely homosexual. According to Kinsey, Pomeroy, and Martin, this group (the 6 on their rating scale) applies to not more than 4 per cent of the total male population.

To quote again from Sexual Behavior in the Human Male (page 652), "since only 50 per cent of the population is exclusively heterosexual throughout its adult life, and since only 4 per cent is exclusively homosexual throughout its life, it appears that nearly one half (46 per cent) of the population engages in both heterosexual and homosexual activities or reacts to persons of both sexes in the course of their adult lives."

If we allow ourselves the use of the term "bisexuality" in this 46 per cent, it is evident that the term homosexuality is applied much too often. The reason is that even one homosexual contact in a man's life, if it becomes known, all too often stamps him forever as a homosexual which, of course, he is not.

If, therefore, we restrict "homosexuality" and "homosexual" to only the above 4 per cent, and otherwise speak merely of homosexual behavior, inclinations, and more or less frequent activities, we come a little closer to the truth and are being, in addition, more fair. In any event, let us remember that the great majority of all so-called homosexuals are in reality bisexually oriented although they may live exclusively homo- or heterosexual lives.
These are fundamental facts that deserve to be recalled.

Furthermore, homosexual orientation may be a symptom, as are transvestism and transsexualism, with a variety of possible causes and inceptions. These causes and inceptions may be anchored in an inherited or congenital (constitutional) predisposition or they may be an acquired condition.

It is unfortunate in a way that the very descriptive term "intersexuality" is not used in this country except for hermaphroditic deformities, that is to say, for purely physical manifestations. Why it should not be used for psychosexual abnormalities too is not quite clear. But, making concessions to American science, "intersexuality" shall not be applied either to transvestism or transsexualism, nor to homosexuality.

The most evident distinction between these three disorders lies in the sex partner: for the present discussion, a male sex partner, his existence or nonexistence, and his significance. Homosexual activity is not feasible without him. He is a primary factor. The homosexual is a man and wants to be nothing else. He is merely aroused sexually by another man. Even if he is of the effeminate variety, he is still in harmony with his male sex and his masculine gender. The TV and the TS are not in such harmony. Besides, TVism (that is, cross-dressing) is a completely solitary act, requiring no partner at all for its enjoyment. In TSism the chief object is the sex transformation. A male sex partner may afterward be desired more or less urgently, but he is a secondary factor, often enough dispensable and by no means constant.

The sex relations of the male homosexual are those of man with man. The sex relations of a male transsexual are those of a woman with a man, hindered only by the anatomical structures that an operation is to alter. The sex relations of a transvestite are (in the majority) those of heterosexual partners, the male, however, frequently assuming the female position in coitus.
In other words: Homosexuality is a sex problem, affecting two persons, a sex partner (of the same sex) being a primary and generally indispensable prerequisite.

Transsexualism is a sex and gender problem, the transsexual being primarily concerned with his (or her) self only, a sex partner being of secondary although occasionally vital importance.

Transvestism is a social problem with a sex and gender implication, the transvestite requiring no sex partner (for his cross-dressing).

Neither the homosexual nor the bisexual is disoriented in his sex or gender role. Even those known as "queens," who are the effeminate type of homosexuals, as a rule "dress" for expediency without emotional necessity and have no desire to change their sex.

There are homosexuals who get an emotional satisfaction from cross-dressing. It would be a matter of semantics to consider them "homosexual transvestites" or "transvestitic homosexuals." They simply desire, for their sexual gratification, both cross-dressing and a partner of the same sex.

Daniel Brown says "The criterion of homosexuality is simply sexual behavior involving individuals of the same sex, while the criterion of inversion is a personality in which the person's thinking, feeling, and acting are typical of the opposite sex."

Charles Prince, whom we will meet again in a later chapter, formed a theory as to the psychological inception of all three deviations. It concerns the child's identification with the wrong parent, particularly the boy with his mother or with another female. He says:

Those impressed with the sexual women are likely to express their feminity in sexual behavior and become homosexual; those fixed on the psychological aspect maintain that they are women in a male body and that they feel as women. They seek emasculatory surgery to bring the body in conformity with the psyche. They are the transsexuals. Finally, those who were set on the social aspects of women seek to emulate her in expressing their feminity, which means their clothing, adomment, hair-do, mannerisms, etc. This type becomes a transvestite.

From all that has been said, it seems evident that the question "Is the transsexual homosexual?" must be answered "yes" and " no." "Yes," if his anatomy is considered; "no" if his psyche is given preference.

What would be the situation after corrective surgery has been performed and the sex anatomy now resembles that of a woman? Is the "new woman" still a homosexual man? "Yes," if pedantry and technicalities prevail. "No" if reason and common sense are applied and if the respective patient is treated as an individual and not as a rubber stamp.

Again the thought clearly emerges that what we call "sex" is of a very dubious nature and has no accurate scientific meaning. Between "male" and "female," "sex" is a continuum with many "in betweens."

To bring the discussion regarding the three deviations of the title of this chapter to a close, a nutshell characterization would be this:

The transvestite has a social problem.
The transsexual has a gender problem.
The homosexual has a sex problem.

After having devised the first S.O.S. chart, it was shown to two of the most earnest students of the transvestitic problem, both transvestites

themselves, and they formulated charts of their own. In one, seven types were likewise recognized and recorded as follows:

Type	Characterization
1	Fetishist
2	Low intensity TV
3	True femiphile TV
4	Asexual type
5	Gender type TS
6	Intensive sexual type TS
7	Operated TS

In the other chart, five groups of transvestites were classified and their prevalence estimated as follows:

Type	Percentage
1 Fetishist	25
2 Narcissist	50
3 Exhibitionist	10
4 Pseudo-transsexual	10
5 Transsexual	5

An interesting and detailed description of the individual types or groups in these two charts may - it is to be hoped - find a place of publication elsewhere. An estimation such as this "from within" is certainly valuable to compare with my own S.O.S. derived strictly "from without."

Brown, Daniel. Amer. J. Orthopsychiatry, April 1958.

Taken from an abstract of "The Expression of Feminity in the Male," a lecture given before the SSSS, November 1963. See also C. V. Prince, "Homosexuality, Transvestism and Transsexualism," Amer. J. Psychotherapy, January 1957.

See also the striking discussion with philosophical overtones in the chapter "The Complimentarity of Human Sexes," by G. B. Lal.

The Transvestite in older and newer aspects

Men who dress as women can have a variety of motivations for doing so. Their emotional lives may or may not be involved.

Nonaffective dressing

To dress in female attire may be merely an expediency, a disguise in order to remain unrecognized, for instance, when trying to hide or escape arrest or when crossing a border. The same disguise may be used by women who put on men's clothes. Crimes are known to have been committed with such help, entrance has been gained into otherwise inaccessible places such as club rooms, closed meeting places, and the like. Detectives have masqueraded as women for the purpose of entrapment. None of such persons is a transvestite.

Professional female impersonators "dress" on the stage, but not all of them are transvestites and even fewer are transsexuals, who attain emotional relief through their job. The majority are homosexual with or without transvestitic tendencies, while a few are "straight" and merely make their living in this type of stage work.

There are also homosexual men who go "in drag," that is to say, dress as women in order to compete at a contest or, as male prostitutes, wish to attract normal men. Their aetions usually have nothing to do with transvestism either, the female attire being incidental, nonaffective, and without eroticism. There are, of course, also transsexual male prostitutes, as we will see later on.

In transvestism proper, the emotions are always involved, tinged more or less with eroticism, sexual stimulation, - and often masturbatory satisfaction.

Pseudo transvestism

The mildest form of transvestism (I on the S.O.S.) would be represented by the following case:

V.A. is a professional man, an art teacher, and a student of psychology. Now in his sixtieth year, he considers himself largely homosexual, at least in the last few years of his life. He was married twice but has no children. His second wife, who died only recently, was an attorney and a very understanding companion. His sexual history would classify him on the Kinsey Scale as a 3 (bisexual) throughout his younger years, and now probably a 5.

When asked about transvestism, he said: "Certainly I used to get a kick out of putting on some female underwear and even 'dressing' entirely. It was a sexual stimulant and could help with girls as well as boys. Now I 'dress' no more, and even in the past I didn't do it too often".

Many such cases undoubtedly exist, but since they are not obsessive or likely to cause complications, they require no treatment and are of minor importance to the individual as well as to society. They may be called pseudo-transvestites.

Another, probably very small group of men may belong to the same category. They do not ever "dress" overtly, out of fear or shame, but greatly enjoy transvestitic fantasies and literature. It is probably immaterial whether to classify them as pseudo or not at all.

The true male transvestite

A large group of male transvestites (TVs) can be called "true" because cross-dressing is the principal if not the only symptom of their deviation. They dress out of a strong, sometimes overwhelming, emotional urge that - to say the least - contains unmistakable sexual overtones. Some of them can resemble addicts, the need for "dressing" increasing with increasing indulgences.

This true male transvestite may be called periodic or, in other instances, partial, when he dresses only on more or less frequent occasions or when he merely wears some female garments under his man's clothes. He would be constant if he lived altogether as a woman.

The facts may apply to the female as well as to the male, but this chapter will be devoted to the male only. Female transvestism seems to be rare and of somewhat doubtful reality. Women's fashions are such as to allow a female transvestite to indulge her wish to wear male attire without being too conspicuous. Her deviation has been considered merely arrogant while male transvestism is to many objectionable because, in their opinion, it humiliates.

Transvestism has been known throughout history and is not confined to any races or racial groups, nor to any stratum of society. A competent student of transvestism and a transvestite himself who wrote under the name of "Janet Thompson" says this: "It appears to develop in families ranging from the apparently wellbalanced emotionally and financially secure to the insecure, impoverished, or broken families. Neither economic, social, marital, family status, nor type of career ean be pointed to as being particularly conducive to the

development of transvestism."

Sexual roots of transvestism

Many times I have asked transvestites: "Whlat do you get out of 'dressing' ?" The answers naturally differed from individual to individual.

"When I dress, it feels as if I have a continuous orgasm," was the frankest sexual answer.

"A great erotic stimulant," "a sexual release," "a sexual glow," "a wonderful erotic pleasure," were others.

There were nonsexual answers too, usually among the older transvestites or from the transsexuals or from those under estrogen medication. They said:

"When I dress, I feel at last myself," or "it's a delicious relaxation." "That's the life," exclaimed one, stretching himself voluptuously, and many similar expressions, pointing more to a relief of gender discomfort than to sexual pleasure.

Sexual reasons for male transvestism are especially evident in the early stages of a transvestitic career. No experienced clinician can doubt the sexual roots in the large majority of transvestites. In most of the medical literature it is, therefore, perhaps not too fortunately, referred to as a sexual deviation or perversion. The often admitted masturbatory activities during or after a transvestitie spree confirm this view. The frequently reported guilt feelings and disgust that are followed, with purges, that is to say, getting rid of all female attire, likewise point to the, - basically - sexual nature of transvestism ("Post coitum omne animal triste?").

In a heterosexual relationship (and most true TVs are overtly heterosexual; some may be bisexual), potency can often be assured only by partial "dressing," for instance, in a female nightgown .

It is undoubtedly correct that many TVs, in the later years of their lives, "dress" more for emotional comfort than for conscious sexual reasons. But it must also be remembered that the tendency exists with many TVs to minimize the sexual nature of their "caprice" because they like to conform to morality, that is to say, to the antisexual atmosphere of our culture.

Emphatic among present-day writers as to a supposedly nonsexual nature of transvestism is Charles Prince, Ph.D., who himself is a transvestite. He would like to see the term transvestism replaced by "femiphilia," indicating "the love of things feminine," and he believes that in this way much of the association between transvestism and sex may be eliminated. More will have to be said on his concept a little later.

The aforementioned, rather keenly observant "Janet Thompson" does not completely deny the sexual roots of the disorder, but adds these words: "Transvestism falls into the category of a behavior problem rather than into that of a sexual problem as it is usually being classified."

Older European writers on the subject, such sexologists as Krafft-Ebing, Havelock Ellis, Hirschfeld, Moll, Bloch, Rohleder, and others have recorded numerous types of TVs according to other accompanying symptoms, most of them having a definite sexual implication. We find references, to "heterosexual," "homosexual," "bisexual," "automonosexual" (autoerotic), "narcissistic," "fetishistic," and "sadomasochistic," and also to the above mentioned "constant, " "partial," or "periodic" TVs, and so on. All these definitions are largely descriptive and such would be their principal value. All kinds of combinations may exist and no two cases are ever alike.

Every TV follows his own individual pattern that does not readily fit into a too rigid classification. Anticipating a later discussion, I may say here that in my opinion, TVs are products of their congenital or inborn sexual constitution that is shaped and altered by cultural factors and by childhood conditioning. It can, therefore, produce an endless variety of clinical pictures.

Havelock Ellis believed in two basic groups of transvestites: one that only "dresses," and another that "feels" himself to belong to the opposite sex, although having no delusion as to his or her anatomical conformation. This concept is strikingly similar to my own: One group includes the transvestites, and the other the transsexuals.

Kinsey and collaborators recognize the phenomenon to have "many different situations and many different origins."

The inception or the "trigger" of transvestitic desires and activities (inception not being synonymous with causation or etiology) can, I believe, be twofold: (1) fetishistic (S.O.S. II) and (2) latent and basically transsexual (S.O.S. III). The first would represent a sexual deviation; the second a gender disharmony as well.

The fetishistic transvestite

The fetishistic transvestite usually starts, often even in childhood, with a morbid interest in a particular object of the female wardrobe (usually mother's or older sister's as the ones most readily available and therefore not incestuous). They are panties, bloomers, corsets, bras, nightgowns, or other garments, but also shoes (especially with high heels), stockings, or gloves. These articles often serve masturbation. A thoughtful student of transvestisrn, drawing from personal experience and intimate talks with other transvestites, has divided these fetishistic preferences into "overs" and "unders." The "overs" begin with shoes, the "unders" with undergarments. More and more articles of female clothing can then become fetishes, the "overs" gradually leading to the complete act of female impersonation with total feminine simulation in hair-do, dress, and makeup." The "under" group of fetishistic transvestites dress less often in complete attire but go through life like any other man, only constantly wearing some female garments like panties or bras underneath their normal male clothing. Without them, their frustration may become well-nigh intolerable.

One of my patients of many years ago a man in his late sixties, was accustomed to this form of transvestism when he went out. Only at home did he "dress" completely. Once he was in a street accident and was taken unconscious to a hospital. When the female undergarments were discovered, the examining physician, completely unacquainted with transvestism, wrote the fact into the hospital record (where I saw it), together with the diagnosis of "concussion" and "patient evidently a degenerate." The only consoling feature is that this example of medical ignorance occurred over twenty years ago.

Another one of my patients, a nearly sixty-year-old, largely heterosexual pharmacist, who looks little more than forty, combines his fetishistic "dressing" with a strong fetish for youthful apparel (civistism). He gets an even greater "sexual glow" (as he describes it) from dressing like a very young boy than as a woman. Once, he related, when he was almost fifty, he was alone at home and indulged in dressing in a young boy's suit. The bell rang and he opened the door. A man was there and in the poorly lighted entrance hall, he mistook my patient for a child and asked: "Sonny, is your mother home?" That thrilled him to such an extent that he almost had an orgasm.

The transvestite with a latent transsexual trend

The second inception of transvestism is not fetishistic but in all probability the result of an inborn or early acquired transsexual trend of "latent" character. (S.O.S. III). Those patients (like true transsexuals), invariably date the beginning of their deviation to

earliest childhood. "As long as I can remember, I wanted to be a girl" is a frequent part of their history. While it is quite possible that such statements may merely express the wish that it may be so, most evidence gained not only from patients but also from relatives points to the fact that transvestitic tendencies, in the great majority of all cases, were noted in the first five or six years of the child's life.

A sharp differentiation between a fetishistic and a latent transsexual inception of transvestism is not always possible. The fetishistic can gradually develop into the (basically) transsexual variety, as case histories have repeatedly shown me. The former, however, may well contain elements of the latter from the very beginning. Otherwise the initial morbid interest in one or several articles of female wardrobe would hardly have evolved into the desire for total "dressing." The basic transsexualism may therefore explain an occasional and, seemingly, progressive nature of transvestism.

The sexual element in transvestism seemed to me always more manifest in the fetishistic than in the latent transsexual type where (as in true transsexualism) a low sex drive and gender dissatisfaction frequently predominated.

Transvestite publications

One of the most devoted students of the transvestitic puzzle is the aforementioned Charles Prince, who is the founder and (under the name of Virginia Prince) editor of Transvestia, a magazine "by, for, and about transvestites." This magazine, founded in 1959, has been enormously helpful to persons who had suffered intensely under this lonely deviation and, for the first time, learned that they were not alone and that many others are in the same situation. By accepting themselves as they are, many have learned to live with transvestism in reasonable contentment.

Transvestia gives the impression of a "subjective" publication, "Virginia' s" name dominating the pages of many issues as teacher, mentor, and spokesman for the transvestitic "sorority." Support is given by a co-editor, "Susanna," who rarely fails to contribute interesting thoughts. Through questionnaires sent to subscribers and through lectures and articles for scientific and educational journals, Prince has made valuable contributions "from within," while most other writers on the subject (including the present one), decidedly approach the subject "from without."

Prince coined the word "Femmepersonator" (F.P.) to replace transvestite for two reasons: first, to counteract the popular confusion with homosexuality, under which the word transvestism suffers, and

second, as mentioned before, to try to take "some sex out of it." Unfortunately, Femmepersonator readily invites confusion with female impersonator," and is therefore hardly the best term. The de-sexing attempt is merely one example of the frequent lack of realism among transvestites and their ever-present capacity for illusion and self-deception.

The inability of many of them to look at themselves objectively is their great handicap. It explains that all too often they do not look like women at all when "dressed," but like men dressed up as women. They do not see it and that is why some of them are arrested. One only has to look at some of the photos published in Transvestia and Turnabout to recognize the truth of this observation. While unfortunate, the self-deception is understandable if we think of the wish being the ever-present motivating force.

Side publications by Prince, called Femme Mirror and Clip Sheet, add little if anything to the original educational nature of a praiseworthy enterprise and may even - by its vague commercializing charaeter - detract from its value.

The denial of sexual motives for transvestites, except for those that are fetishists, is meant to make TVism more respectable and therefore more acceptable to the public. "Virginia" and her followers believe in "the need for adornment and personality expression" and in the "relief from the problems of masculinity and social expectancy" as explanation and justification for transvestism.

Prince has developed a rather elaborate theory. He believes the cause for transvestitic desires and behavior to be largely cultural. Boys are taught to do this, and not to do that, for instance, not acting in feminine ways, not crying too easily, or not playing with dolls instead of with trains. In this way, the female component in their constitutional makeup is artificially suppressed. But it may break through sooner or later in life, leading to transvestitic urges.This is an interesting concept but the objective and emotionally uninvolved outsider and clinician cannot agree. The cultural pressure applies to practically everybody, but transvestites are only few, very few, in proportion to the population.

Besides, to take sex out of transvestism is like taking music out of opera. It simply cannot be done. The histories of too many patients prove that sex is more often involved than gender, although gender too can naturally supply a vital motive for cross-dressing.

The actual cause of sex and gender disorientation, with its transvestitic and transsexual syndromes, is still to be discovered. An immature or an infantile sexual constitution (fostered by a faulty upbringing) may

have something to do with the cause of transvestism, even if gradually, and with advancing years, the social contentment and a gender harmony that goes with "dressing" overshadows or even replaces its original eroticism.

A seemingly more objective approach to the problem can be found in the pages of Turnabout, another more recent magazine of transvestism. Its competent editor, Fred Shaw, writing under different pseudonyms, with several qualified collaborators, likewise provides self-expression for their readers through letters and photographs, but they provide, at the same time, education and information through scientific debates, giving expression to diversified views.

They disagree with "Virginia Prince" and her principal theory that "the girl within" prompts transvestites to be what they are and to act as they do. Yet - as we have seen - such theory does contain a grain of truth, namely, the biological fact that in every male there is an element of the female, and vice versa. Our culture and upbringing, however, lead to the practical demands (for males and females), for masculinity and femininity as such, and allow no "girls within" men. It does exist only under just such abnormal conditions as transvestism, transsexualism and certain cases of homosexuality with effeminacy. All this, however, permits no generalization.

In both publications, Transvestia and Turnabout, articles written by TVs and letters to the editor furnish interesting and valuable material for the psychologist. The often infantile and completely self-centered attitude of many transvestites and transsexuals is occasionally and strikingly illustrated, together with a deeply disturbed, unrealistic, frustrated frame of mind which is the more outspoken, the more the writer inclines toward transsexualism. Many articles and letters, however, are remarkably sensible and sometimes humoristic.

In any event, the opportunity to write these contributions and see them printed has a therapeutic value that should not be minimized. Full credit should go to those who had courage enough to furnish the opportunity by pioneering the respective publications. If a danger exists that they may, here or there, seduce a susceptible person, the probability is that, sooner or later, this person would have come to transvestism anyway. And any such theoretical risk to a few is greatly outweighed by the actual benefit for many.

Those TVs, however, who wish to get away from their disturbing hobby would have to shun these publications, together with all transvestitic temptations, gatherings, and the like, and train themselves to live in a completely "normal" (sit venia verbo) environment.

TV publications with their detailed descriptions of "dressing" and their many photos over female names can be an endless delight to the TVs. They can be instructive to the psychologist, but are an unmitigated bore to all others. So are undoubtedly "girlie magazines" to homosexuals and "muscle men" pictures to the heterosexuals. Shoe stores and lingerie shop windows can be sexually stimulating ("obscene," our moralists would say) to the respective fetishists and utterly indifferent to others. So the old clichés are only too true. "It's all in the mind of the spectator," or "One man's meat is another man's poison."

Interpretations of transvestism

The idea that transvestism may be a latent or masked form of homosexuality was expressed by several writers but particularly by the Viennese psychoanalyst, Wilhelm Stekel , and is still favored by some of his followers. The explanation seems simple enough, but to the unprejudiced clinical observer it does not ring true. Kinsey and his collaborators also consider it incorrect. There are too many clearly heterosexual transvestites and it could do no good to saddle them with another (the homosexual) emotional burden, a deviation that they often greatly resent and reject.

But psychoanalytic theories are something like a cult, if not a religion, and are often quite incomprehensible to ordinary clinicians. To them, their explanations and analyses many times appear far-fetched, even absurd, in spite of their often intriguing and sometimes poetic quality.

Psychoanalysis has a language and jargon all its own. In the field of transvestism (and homosexuality) we owe to the psychoanalysts the concepts of the "mother with a penis," the "phalic woman," the "castration fear" which "transvestism attempts to overcome" and others, unnecessary to describe here. These psychoanalytic concepts have been accepted variously as important scientific discoveries, or as ingenious theories, but have also been criticized and rejected as merely intellectual "games," a sophisticated voodoo, if not as plain nonsense and balderdash. This author neither feels competent to pass judgment as to which of the above characterizations is most likely correct, nor would this be the place to express a preference on his part. The prominent psychiatrists and university professors Buerger-Prinz, Giese, and Albrecht in an important German monograph call some psychoanalytic theories "think possibilities without evidence in clinical observation" (phenomenology).

Johann Burchard, psychiatrist and teacher at the University of Hamburg, Germany, gives us a much more acceptable interpretation than the psychoanalytic one. In bis recent German monograph on the subject, he says that homosexual and heterosexual transvestites and

transsexuals are, sexually, double-oriented: toward the ego and toward a partner. In an asexual transvestite or transsexual, even masturbation can be dispensed with, the libido being completely reverted to the ego. These cases become anorgasmic.

In other types, a partner or an object (fetish) plays a part and the narcissistic transvestite has his mirror image. Burchard says transvestism is the result of a pathological development, the etiolgy of which is yet unrecognizable. It is a nonpsychotic syndrome similar to other sexual perversions.

Freud himself, if alive today, would not deny a possible constitutional basis, as he believed in "hereditary, organically fixated, and not only educational factors."

Dr. Robert J. Stoller of the University of Cahfornia, Los Angeles Medical School, in his recent lectures on the biological basis of human sexual behavior, recalled Freud's conviction that sexual conduct has its roots deep in the physical structure of the brain, to which brain chemistry may have to be added.

Around 1930, I once called on Freud during one of my visits to Vienna. At that time, he was still in his home and office at the Bergstrasse. A mutual friend, Dr. Eugen Steinach, Professor of Physiology at the Vienna University and the famous discoverer of the "puberty gland" had made the introduction and appointment for me.

The hour I spent with Freud can never be forgotten. Among many other topics, we discussed the body-mind relationship (suggested by Steinach's researches) and when the pun came to my mind that "the disharmony of the emotions may well be due to a dishormony of our endocrine glands," Freud laughed and fully agreed.

If I learned one thing from this visit, it was that Freud certainly was no "Freudian," in the sense of some of today's practitioners. His biological background and training protected him against the "extremism" of the Bergler and like types. Besides, Freud was big enough to recognize his own occasional errors, admitted them, and tried to correct them.

Illegality of transvestism

The typical or true transvestite is a completely harmless member of society. He derives bis sexual pleasure and his emotional satisfaction in a strictly solitary fashion. The absence of a partner for bis particular sex expression differentiates him radically from all so-called sex offenders. According to a strict interpretation of the law, however, he can be prosecuted just the same, even for "dressing" in the privacy of

his own home (in an "enclosure"); more so, of course, if he appears in public in female attire.

Some transvestites have learned to dress and make up so cleverly and move in such a natural, feminine way that they cannot be "read," as the saying goes. This affords additional satisfaction because the transvestite now feels he has succeeded in creating a new (and second) personality for himself. This "new" female personality reinforces the female name that all transvestites assume. The male speaks of his female counterpart as of another person, a habit that can be most confusing to the uninitiated. I have examples of transvestites possessing two driver's licenses, one in a male and one in a female identification. Also, two social security cards, in case they hold jobs as males and females at different times.

Family life of transvestites

The majority of transvestites I know make their livings as men, but can be quite miserable when dressed in male clothes. Not being interested, they do not dress well as men and frequently look shabby. They long for the moment when they come home and can relax in their feminine finery, perhaps only a fancy dressing gown. There, the best is never too good. The wife is often in a quandary, lest the children get a glimpse of their father dressed as a woman, or visitors may come before the husband can disappear into the bathroom and change clothes.

For their future psychological development, children should certainly be protected against learning of their father's transvestism and seeing him "dressed." Especially, a boy's identification with the father image may suffer irreparable damage. I have one patient, a transsexual, who told me "she" (this patient is living as woman although she has had no operation), has never seen her father dressed as a man, nor has she ever seen her mother (who was also a transvestite) dressed as a woman. It would appear most unlikely that under such pathological conditioning a normal adult male could have resulted. This, however, is an extreme case, possibly consciously or unconsciously exaggerated to justify the patient's own transsexualism. It is by no means typical.

In any event, it seems inexcusable for any father to let his chil,en see him openly indulging in his transvestitic pleasures. Few wives and mothers would stand for it either, although I have known of two or three such marriages to persist.

Transvestites for whom "dressing" is necessary to preserve an emotional balance can develop other and more serious symptoms, if frustrated too long. I have seen alcoholic excesses acting as

substitutes, and drug habits may find their inception in this way. I have also seen great nervous irritability develop so that a job was lost and family life disrupted. "He flies off the handle at the least provocation," a wife said of her husband, when he was unable to "dress" from time to time and "be himself" in female attire.

One of my patients, a rather shy and timid person as a man, changes completely when he assumes his female role. As a woman, he loses his self-consciousness and his feeling of insecurity which he himself explains: "Self-reliance, a certain aggressiveness and dominance are expected of a man. This is against my nature. It is not expected of a woman. Therefore, as a woman, I feel at ease, more secure and my true self." In his male role, this patient suffers from intense fear of high places. He panics at the idea of traveling by plane. When "dressed," no such fear exists and he takes trips by plane regularly and can enjoy them.

Not all such "nervous" symptoms need be psychogenic. It would be wise for a doctor to be hypoglycemia-conscious. Intense frustration to which TVs and TSs are subject, coupled with (frequently observed) poor eating habits, can produce a functional hypoglycemia that may give rise to emotional extremism, lack of judgment and control, compulsive actions, together with physical manifestations, dizziness, fainting spells, heart palpitations, and so on. Proper medical treatment with particular attention to diet can then be very helpful.

Transvestites' wives

The wives of transvestites constitute a psychological problem by themselves. I have spoken to at least a dozen. Most of them put up a brave front, claiming to be unaffected in their love for their husbands, but admitting they are certainly not happy about the TVism, even suffering acutely at times. Few, but very few, say they enjoy helping their husbands to "dress" and "make up" and actually like him in his female as much as his male role. Are they fooling themselves, or are they lesbians? I have asked myself these questions many times. Only deeper psychological probing may provide the answers. The husband's ability as a lover and the wife's sexual needs are often deciding factors as to whether a marriage can endure or not. Some can (if mutual concessions are made). Many cannot.

I have observed rare examples when the wife actually was more homo- than heterosexual and liked her husband better as a woman than as a man. A lesbianlike relationship existed that satisfied both, with the husband's transvestism on a transsexual basis (S.O.S. III-IV) finding an almost ideal outlet.

Perhaps a majority of transvestites' wives are willing to tolerate he husband's hobby, provided they do not have to see him dressed as a woman. I also know marriages of many years' standing when the wife actually never knew of the husband's transvestism, although he indulged in it regularly, several times a month outside of the house. Hugo Beigel, in an article, "Wives of Transvestites," described the situation in similar terms.

No transvestite should ever marry a girl without telling her of his peculiarity beforehand. It would be too unfair. Too many have not done so and paid dearly later on. Among Buchner's subjects, 72 per cent did not tell.

Concomitant deviations

Accompanying perversions or deviations that often complicate transvestism have been hinted at earlier. They occasionally worry the wives particularly or aggravate their problem. They are rarely mentioned in the literature, except in the TV publications.

The most dangerous is probably the desire for "bondage," occasionally with self-strangulation attempts. How often these attempts may go just a little too far, or help may come just a little too late and an unexplained and mysterious "suicide" makes the headlines, anybody may guess.

Flagellation is occasionally demanded by TVs visiting prostitutes in female attire or wanting to "dress" in their homes and merely talk "girl talk" to them like "one girl to another." Some TVs with masochistic inclinations want to be humiliated at the same time. They dress in a servant girl's clothes and want to be ordered around to do washing, cleaning, scrubbing floors, and the like. They are willing to pay well for this kind of "sex service." I knew a noted cardiologist who indulged regularly in this, his only adequate sex life.

Fetishism (S.O.S. II) complicates other TVs' sex lives. At the same time, it puts an additional strain on married life. There are those who like furs or leather. They buy jackets, coats, and entire outfits at considerable expense so that the wife has a just grievance, if she cannot afford anything like it for her own wardrobe.

That applies equally to expensive silk gowns and still more so to shoes made to order, often with extra high heels, and new ones all the time. Considerable expenditures also go into the purchase of wigs, jewelry, and accessories.

Much has been made of narcissistic tendencies in TVs. True, most of them spend an abnormal time in front of mirrors, admiring their images as women, only too often overdressing and overadorning themselves with costume jewelry. But whether they are really "in love" with themselves as the classic Narcissus was supposed to be is another question. Exaggerated female vanity may account for the same actions and also for the delight in being photographed in all kinds of poses to show off their new dresses, wigs, or hair-dos. Mirror and camera are certainly indispensable adjuncts to a transvestite's life. Since they are harmless and help emotionally, they have their justification.

The transvestite types discussed here are the S.O.S. II and III principally. In them the symptom of cross-dressing is by far in the foreground of the clinical picture. The TVs with their desire to see such physical changes as gynecomastia through hormone treatments or plastic operations show enough of an overt transsexual trend to be included in the following chapter.

Garment	Percentage
Shoes with high heels	10
Stockings	16
Panties	22
Nightgown	26
Full costume	19

This reference to "feeling" here and in other places is of little scientific significance, as it is too vague, too subjective, and could vary in its meaning, not only from case to case, but also from mood to mood in the same individual.

Kinsey, Pomeroy, Martin, Gebhard: Sexual Behavior in the Human Female, W. B. Saunders Co., 1953, p. 679.

Turnabout, No. 3, pg. 3. 1964.

His case was fully described by Dr. B. S. Talmey in the NY Medical Journal of February 21, 1914, except for the incident here reported, which occurred toward the end of the patient's life.

Buchner found that first transvestitic experience in his group of Transvestia readers were:

Age	Percentage
Before 4.9 years	14

Between 5 and 9.9 years	39
Between 10 and 17.9 years	39
After 18 years	8

Stekel was first a pupil of Sigmund Freud, but later became his rival and antagonist.

Buerger-Prinz, H., Albrecht, H., Giese, H. Zur Phenomenologie des Transvestismus bei Maennern. Enke Verlag, 1953.

Struktur und Soziologie des Transvestismus und Transsexualismus, Enke Verlag, 1961.

Sigmund Freud. Ges. Werke. Imago Publications, London, Vol. 70.

The hormone-producing part of the testicle.

See Chapter 9 on legal aspects.

Among Buchner's subjects, from 20 to 37 per cent seem to feel that way.

Buchner found the wives' attitudes as follows:

Attitude of wife	**Percentage**
Completely accepting and cooperative[a]	25
Permits dressing only at home but in her presence	11
Permits, but does not want to see	20
Knows about TVism but completely antagonistic	21
Unaware of husband's transvestism	18

[a] According to my observations, the 25 per cent is too optimistic.

Sexology Magazine, July 1963.

The Male Transsexual

Readers of the foregoing chapters already should be fairly well acquainted with the (transsexual) man who wants not only to appear as a woman by dressing as one, but who actually wants to be a woman in appearance as well as function and wants medical science to make him such as far as that is possible. In other words, it is the man who suffers from a reversed gender role and false gender orientation. He wants to change sex.

As we have seen, these persons, in a strictly scientific sense, fool themselves. No actual change of sex is ever possible. Sex and gender (to repeat for the sake of clarity) are decided at the moment of conception, when either two X chromosomes, one from the father and one from the mother, lay the foundation for a future girl, when one Y chromosome (from the father) and one X chromosome (from the mother) insure the birth of a boy.
Nevertheless, the wish to change sex persists, and for all practica1 purposes such can and has been accomplished as far as the individual's future life and position in society are concerned. This alteration, from male to female, concerns only the visible genitalia and secondary sex characters. To the extent of external apearance it can be successful and convincing.
If a chromosomal study should be made, however, the true (chromosomal) sex would be discovered and this remains true no matter how long the person may have lived as a member of the opposite sex or what operations or hormone treatments may have been applied.

The transsexual in life and love

There is hardly a person so constantly unhappy (before sex change) as the transsexual. Only for short periods of his (or her) life, such as those rare moments of hope when a conversion operation seems attainable or when, successfully assuming the identity of a woman in name, dress, and social acceptance, is he able to forget his misery. It is not always the frustrated, passionate sexuality, but more so the heart-breaking anguish of the transsexual's gender disharmony that makes him forever a candidate for self-mutilation, suicide, or its attempt. The false relief obtained from alcohol and drugs is not an infrequent complication.

Self-mutilations are no rarity and have occurred in at least four of my patients out of a total of 152 transsexual males. Two of them tried to castrate themselves but had to give up and call a doctor. One succeeded with the help of a friend in completing the job. One mutilated the penis, requiring several stitches to repair the damage. Many more such incidents have been reported and still more can be safely assumed.

The three patients who castrated themselves or attempted it eventually succeeded in being operated upon in the United States, having testicles and penis removed and a vagina constructed. They are now living as women. The fourth patient is still hoping to find a courageous and understanding surgeon in the United States or, otherwise, to raise the money for a trip abroad.

Sometimes these acts of self-mutilation are done in desperation. Others are more deliberate and are meant to force the surgeon's hand to complete the genital alteration which he had refused to undertake for reasons of his ethical concepts, or for lack of hospital facilities (where the necessary permission was withheld by the hospital board), for fear of criticism or out of consideration of existing laws.

Finally, surgeons untrained in this type of surgery may lack confidence in their own skill and may be fearful of consequences if a satisfactory (to the patient) outcome should not ensue. Lawyers too are known to have advised the surgeon against operating. Suicides with "motive unknown" have undoubtedly occurred because of the inability to procure surgical help for the sex change.

I remember only too vividly thirty-year-old Juan, a true TS, who much preferred to be called Juana. Aside from his gender unhappiness, his greatest physical handicap was a very heavy dark beard which would have taken much time and money to remove. He was also handicapped by extreme, almost paranoic sensitiveness to remarks referring to the feminine impression he made and to his assumed homosexual inclination. In addition, there was great poverty and inferior education. It all added up to deep unhappiness without hope for the future.

The time came when my psychological help and estrogen treatment had reached the limit of what they could do. Then the surgeon should have taken over to try to salvage this patient. But no surgical help was available.
I did not hear from Juan for several months, but at Christmas time 1963, the following note was received:

Dear Dr. Benjamin:
Finally I have to give up my struggle. Now I just exist waiting in misery for the moment to take leave of this earth in which I have been so miserable.
My regards to Virginia, God keep you all in health and good will, so that you can be, someway or another, of good to your fellow man.
Good-bye forever, J.

Attempts to get in touch with him failed. I would like to believe his note to be not more than a hysterical outcry, but the probability is he did find the only solution that he could see for his problem.

Sympathy, understanding, and especially any degree of empathy is found for transsexuals generally only among their own. Therefore they are always anxious to meet someone with the same problem or at least correspond with one. Close friendships are often formed, two transsexuals for instance living together before or after the operation.

Contrary to popular assumptions, these friendships are without overt sexuality. They are like two lonely, "normal women" living together, each one wishing for a man as a sex partner, unless asexuality prevails.

To their families, these transsexuals are often an enormous problem. Such a person may dress and behave in an embarrassingly feminine manner, let the hair grow long, may have love affairs with normal men, threaten suicide when opposed too much, speak of his future life as a woman after the operation without much regard for the feelings of others, especially parents, who cannot easily accept having a daughter instead of a son, or siblings who may respond in the same way to having a sister instead of a brother. The patient, however, feels that it is his own future life that is at stake and he does not want to sacrifice it to please somebody else. Relatives often fear being embarrassed through gossip among friends and neighbors more than anything else, and for that reason oppose the "change," the possible happiness of the child taking second place.

Psychological state and sex life in transsexuals

"The need for recognition, attention and acceptance, coupled with inner feelings of being rejected and ignored is prominent in all subjects," said Drs. Worden and Marsh with full justification.

Many transsexuals have no overt sex life at all. As Burchard has said, the sex drive in some of them is turned inward toward their own ego. Masturbation is then occasionally practiced, but the urge for it is low and under estrogen treatment gets even lower, to the point of zero.

Other transsexuals, however, have a sex life. There are those who still preserve a normal married life, that is to say, with a woman. They say they are able to have sex relations with the help of fantasies, by taking a succubus (under) position in intercourse, or by wearing a female nightgown. Some of these married transsexuals described to me a mental state during intercourse in which the penis seems to lose its identity of ownership. "The penis may just as well be my wife's being inserted into me as vice versa," one patient expressed it. Another one said bluntly, "I don't know whether I screw or am being screwed." Psychoanalysts may find ingenious explanations for such a phenomenon.

Other transsexuals again have normal boyfriends who treat them as girls whether they live as such or not. They hope, work, and save money for the conversion operation so that they can marry legally. Occasionally, the two persons live beforehand as a married couple,

nobody but a few intimates knowing that they are actually two genetic males. Of course, there is always the fear of discovery, arrest, scandal, and the like, which keeps their emotional state in a precarious balance.

Sex relations vary, the "husband" most often substituting the anus for the not yet existing vagina. Orgasm may be claimed by the "wife," but especially under estrogen treatment, "she" has difficulty getting an erection, which is not considered any handicap at all, rather the opposite, as all manifestations of masculinity are abhorred. Erections are often described as painful, which may have a psychosomatic explanation. Ejaculations gradually diminish and finally disappear as the prostate shrinks under estrogen therapy.

The "husband" in such a union offers an interesting psychological study. Are there actual or latent homosexual inclinations in him so that he can be attracted to a transsexual man? Naturally, the attraction is to the "woman" in this man, but could completely normal, heterosexual men be able to forget the presence of male sex organs, or, if an operation has been performed, even their former existence?

Still other transsexuals find prostitution a useful profession for emotional as well as practical reasons. I am not referring here to the male hustler, who may dress as a woman for "business reasons," but only to the (unoperated upon) transsexual who plays the part of an ordinary prostitute looking for normal heterosexual men as clients. He hides his genitals rather cleverly with the help of a bandage that draws penis and scrotum between the legs. A corset may further protect him against a too inquisitive "John" to whom he offers anal or oral contact, explaining the refusal of normal peno-vaginal relations by claiming menstruation or a too recent abortion or merely that he prefers to "french." He invites playing with his breasts that have usually been enlarged through hormone treatment or a plastic operation. This gives him pleasurable sensations and allays any suspicion the customer may have. Much of the existing handicap and danger are compensated for by the enormous satisfaction the transsexual derives from being so thoroughly accepted as a woman. How much more can his femininity be reaffirmed than by again and again attracting normal, heterosexual, and unsuspecting men and even being paid for rendering sex service as a woman?

Aside from the emotional satisfaction that prostitution may afford (in spite of its hazards as an illegal occupation) it has its decided practical advantages. Not only can the transsexual make his living, but he may also be able to save enough money for the trip abroad (usually Casablanca in 1965) that is his ever-present goal.

How many such male transsexuals are engaged in prostitution before any conversion operation has been performed is impossible to

estimate with any degree of accuracy. They are rare, possibly not more than a few dozen in the whole country. Whether fewer transsexuals become prostitutes, full or part-time, after their operations and after they have become legally female, is difficult to judge.

It has happened in a few cases that all of a sudden, money became available to go abroad (and come back a broad, as somebody quipped) without any evident source. Being aware of the overwhelming, desperate urge of the transsexual to be made "female," doubts have sometimes crept into my mind whether funds were not acquired illegally, other than by prostitution. A parallel to the crimes committed by equally desperate drug addicts readily comes to one's mind.

As far as the psychological state of the transsexual, not operated upon, is concerned, for some of them even a restricted and only partially satisfying sex life seems better than complete frustration and no sex outlet at all. Psychoneurotic symptoms seemed to me to be the more pronounced the greater the sexual frustration. In several, perhaps six to eight of the 152 transsexuals that I have observed up to the end of 1964, a paranoid state or a schizophrenic reaction was diagnosed by psychiatrists, but it was always a question in my mind how much of the psychotic reaction or how much of the psychoneurotic symptoms may be due to the thwarted sex life and the gender discomfort of the transsexual state.

Doctor Ira S. Pauly, psychiatrist at the University of Oregon, said in a recent lecture before the American Psychiatric Association's 120th Annual Meeting in Los Angeles (May 6, 1964): "Because of his isolation, the transsexual has not developed interpersonal skills, and frequently presents the picture of a schizoid or inadequate personality."

Improvement of the mental condition occurred under estrogen treatment as well as after the corrective surgery, but by no means in all cases. Much is yet to he observed and studied along these lines. As a general rule, however, transsexuals are nonpsychotic.

The physical state of male transsexuals

The physical examination of transsexual patients usually reveals nothing remarkable. With the exception of one female transsexual (with ovaries, a rudimentary womb, and a small hypospadic penis), I have seen no hermaphroditic abnormalities. (In this case, correction was made through operation and this patient is living as a reasonably well-adjusted man.) Among my patients I discovered no so-called Klinefelter syndrome (a chromosomal abnormality, characterized by

gynecomastia, sterility, mental retardation, and so on), although such combination of transsexualism and Klinefelter syndrome has been observed and reported in the medical literature.

Otherwise the transsexual male and female are genetically normal. The chromatin pattern was repeatedly examined in both sexes and was negative in all males and positive in all females, which are the normal findings. In three of my rather outspoken cases, one male and two female transsexuals, a so-called karyotype was made, which is a visualization of all (normally 46) chromosomes, and no abnormality was found.

An interesting incident occurred with a female transsexual who was living as a male. "He" was sent to a laboratory specializing in this type of work for a chromatin test. Smears were taken from the mucus membrane of the mouth and the report came to me: "Male."

Somewhat surprised at this finding, I phoned the laboratory and told the examiner that he had found a genetic male in an anatomical female. The examiner who had seen this patient and had assumed he was dealing with a man was taken aback and asked me:
"Is there a vagina?"
"Yes, indeed," I said.
"Then let me make a chromosomal visualization," he requested. "The chromatin test was not too clear."
When such visualization was completed, the diagnosis was unmistakably "female."

All patients were examined routinely for possible sexual underdevelopment, immaturity, or eunuchoidism. Diagnosis of such condition was based on the inspection of the genital organs which naturally allows for a wide variety of individual sizes; on skeletal measurements, for instance, the span being wider than the height; on a low secretion of the 17-ketosteroids, which are the endproducts of male hormone production as they appear in the urine. Naturally, subjective symptoms were taken into consideration, too: for instance, a sex drive and potency below the average, a late start of any sex life including masturbation, and so on.

Such more or less distinct underdevelopment, known as hypogonadism, but rarely to the point of eunuchoidism, was found in 61 cases out of a total of 152 male transsexuals, approximately 40 per cent. These findings may eventually prove to have significance as far as the underlying causes of transsexualism are concerned.

The transsexual's plight

"I cannot stand all this any more," said one of my patients, characteristically pointing downward. "It does not belong to me; it must go."

Another transsexual who had lived and worked successfully as a woman for years, was accepted by her family, and had an excellent plastic breast surgery performed, wanted me to send her finally to a surgeon for genital alteration. I could not help asking her why, when she had already accomplished so much and seemed reasonably contented. With genuine astonishment, she pointed below and said: "But girls don't have that!"

The greatest plight of any true male transsexual is the problem of where to turn to have the conversion operation performed. Even if they find a surgeon who is willing and competent to do the operation (and there are undoubtedly many urological surgeons in this category in the United States), the problem is by no means solved. A hospital is needed for this operation and hospitals have their boards. These boards are partly composed of laymen; among them may be priests, ministers, and rabbis. Without the board's permission, the operation could not be performed in that particular hospital.

One of my patients had a deeply disturbing experience, disturbing not only to him but to every fair-minded person, including independent physicians. Being a highly articulate and educated man, he wrote up his experiences for a magazine, Sex and Censorship, which was published on the West Coast several years ago, but exists no longer. I was impressed with this patient's truthful statements and agreed to write an introduction to his story. In it, I explained the fundamental facts of transsexualism and discussed (regretfully) medical censorship as it exists in this country and in this day and age. Here, in a slightly abbreviated form, is what the patient wrote:

The Unfree
by William J. O'Connell

This writing is about Freedom. It is about how freedom was denied to one person and thus potentially to all, not in Russia or Germany but in the United States dedicated to its defense. It is about me, because I am involved. It is about how I was engaged in the pursuit of happiness. How I chose a certain goal, being sure that my reaching it could not harm anyone else in the pursuit of his happiness. And how I was frustrated in the pursuit of my happiness by men who were bigoted and self-righteous, constituting themselves into a sort of modern lynch mob, the more dangerous for being subtle. I do not ask

you, reader, to be concerned about my frustration. Be concerned, though, for freedom, mine and yours.

The happiness I chose to pursue - had to pursue, more precisely - was simply and shockingly, an operation to change my ostensible sex; for I am a person, physically male, whose mind and heart are feminine. If you, the reader, now turn away, muttering: "Oh, one of them! You ought to be frustrated!" - then you are kindred to the lynch mob, kindred to those who judge black men and Jewish men and freckled men because they are different. The leopard cannot change his spots, and I cannot alter, if I would, the basic femininity of my psyche. If there is indeed an eternal soul, then I suppose mine to be in gender feminine. At all events, what is certain is that from babyhood I have known - call it intuition, call it recognition - known beyond all doubt that I belonged among the women, and have longed to take my place there. Englishmen born and raised in India go home to England. So with me, always: to become a woman would be to come home. A dull home, perhaps, that of a thirty-four-year-old spinster, but still and always home. This would be my happiness: to wake tomorrow and find myself just such a woman. It is, you may think (especially if you are yourself such a woman), a curious sort of happiness to pursue. True; but plain water is more than champagne to one in desert lands.

The pain in my life is not merely that caused by prejudice and misunderstanding. Far more, it is the pain of conflict, the profound dichotomy of mind and body. I have perforce "lived a lie" as man and boy, always painful, always false. Yet to dress as a woman, not being one, is equally false, as well as dangerous. What, then, to do? A problem implies a solution: the solution to mine is to alter one of the elements, mind or body, to conform to the other. Putting aside the possibility of an unchangeable feminine soul, I still must say that my mind and heart - my psyche - have been shaped by a thousand million longings and choices and feminine values; I could not acquire a masculine psyche without ceasing to be myself. Any psychiatrist would admit, a "cure" is hopeless.

But, if mind-conforming is not the solution, there remains the alternative: changing the body to fit the mind. This, within limits, is possible; and to a people that accept false teeth and spectacles, plastic surgery and artificial limbs, it ought not to appear unreasonable. A man may be made endocrinally female by the female hormones, which control the secondary sexual characteristics of hair and breasts; and anatomically female by the removal of male organs and the surgical creation of a vagina. She cannot bear children; but, surely, if she is female in anatomy and hormones and psyche, she is woman. This limited womanhood became my goal, this was the happiness I pursued.

My decision was made in the clear perception that my life was quite intolerable in its falseness. After some hard, realistic thinking, I went to a sexologist, a man wise in the ways of glands and their secretions. He received me with kindness and understanding, and sent me to a psychiatrist who confirmed his judgment that I was of sound mind and quite competent to decide where my happiness lay. Then he carefully began the process of feminization by the administration of estrogen and other female hormones. Months went by while my breasts began to develop and other changes took place and while my doctor studied me and tested and observed. Then at last - a glorious day - he approved me for surgery.

The surgeon, skilled and courteous, was not to be rushed; it was necessary that he be certain in his own conscience that what he was doing was best for me. I could not doubt that this great gentleman, like the sexologist, truly intended, in the words of Hippocrates, to govern his treatment by the needs of the sufferer. To make assurance doubly sure, he sent me to another psychiatrist who, in turn, convened a panel of his brethren. After many hours of discussion and questioning and study, these three psychiatrists unanimously recommended the operation, adding that they were powerless to alter my feminine psyche and that the surgeon would be doing me a great service by operating. Even then the surgeon was not wholly convinced and there were further discussions with him before he at length consented. "Now," I thought, "now at last, the long waiting and the long anxiety are done. Now my life will take on harmony and meaning. Now my great adventure . . ."

But I reckoned without bigotry and prejudice and timidity.

After a fortnight's wait for a bed, I went to the hospital that had agreed to the operation being done provided, I was told, their psychiatrists approved. One of them turned up the first day and, after conversations and tests, endorsed the views of his colleagues. This made a total of five psychiatrists unanimously in favor of the operation. The staff surgeon, who would collaborate in doing it, also came round, friendly and sympathetic. But then there was a delay. A staff psychiatrist was supposed to come by, but, it seemed, he was unwilling to do so. Day after day I lay there, existing on the meatless diet, having to go outside to smoke - rigors imposed not by my religious beliefs but by the hospital's. Finally a member of the all-important Tissue Committee appeared: the Committee, because of protest from the "religious elements" of the hospital, were to review my case. But my visitor, although he was perhaps to present my side of the matter to his colleagues, seemed much more interested in talking than in listening; I think his mind was made up, and I think that neither justice nor "the needs of the sufferer" found any room there.

The Tissue Committee refused to permit the operation. They did not ask me to present my case; indeed, it was quite obvious (as I was told by one of the doctors) that they did not consider me at all but only considered placating the "religious elements." Thus the careful, conscientious studies of sexologist, surgeon, and a battery of psychiatrists went for nothing. The hospital had sacrificed their honor (since I had been admitted under an implicit agreement) and their mission (to help those in need) for the sake of a bigoted few. For all that, they did not hesitate to charge me two hundred of the dollars I had so laboriously saved for the operation - two hundred dollars for discomfort and profound disrespect. No other hospital, now, would accept me after this one had turned me out; in any case, my short vacation was gone for another year. There was nothing to do but accept defeat and go home to Seattle. Later I wrote twice to the Committee, protesting, offering religious reasons for the operation. There was no reply at all - perhaps they had carried out an ecclesiastical excommunication with bell, book, and candle. More probably, the individual soul was not important to these "Christian gentlemen."

Where does the blame lie for this fiasco? I had sought my own happiness, a happiness that could harm no other living person; and I had been stopped by the bigoted and the self-righteous; my freedom had been denied. Not very much can be said in extenuation of the particular hospital involved, for they had admitted me and charged me under an agreement which they dishonored; and the gentry who voted not to allow the operation were manifestly false to their oath to be governed in their treatment "by the needs of the sufferer" - they were governed by bigotry and timidity and my needs were not considered. But other hospitals, though less dishonorable, are as timid. What lies behind their unwillingness to permit an operation that, in the considered judgment of nearly a dozen doctors, is necessary? There are, it seems to me, three elements of their timidity: legality, religion, and disrespect for freedom.

The law is not lucid in matters of this sort. The common law and certain ancient statutes forbid mayhem. Mayhem is depriving someone of limbs necessary for self-defense - a sword arm or a trigger finger. It is somewhat difficult to regard sexual organs as being useful in self-defense. Moreover, such laws had in view, of course, maiming by force, without consent. In short, the law of mayhem is not automatically applicable, if at all, to the removal of sexual organs with the patient's consent. Especially since the courts themselves castrate certain criminals. Nevertheless, a prejudiced district attorney might drag out this law and attempt to apply it to a hospital which was a party to the operation. Whether there could be a conviction and, particularly, whether any higher court would sustain such conviction, is perhaps doubtful. The surgeons were willing to risk it, if their

consciences approved. It is difficult to believe that the hospital refused me because of this law.

Religion, not necessarily genuine religion, is the force behind the hospital attitude; indeed, it would be the force behind the public opinion that might persuade a district attorney to invoke the law of mayhem. Public opinion is undoubtedly hostile to this operation, as witness the covert sneers surrounding the recent celebrated case of an American soldier who became a woman; people are shocked at femininity in a man and at castration (far more so than at the removal of a woman's ovaries). Undoubtedly this attitude is based on ideas of the inferiority of women, ideas that receive a certain sanction in the writings of St. Paul. Obviously, an operation never dreamed of in early Christian times is not forbidden in the Bible, nor is there any verse that can be construed to forbid it in spirit. Thus the vaguely religious hostility to the operation does not at all mean that Christianity is really opposed to it. Being myself a devout Baptist, I've had some reason to think about the morality of the operation, more deeply perhaps than the "religious element" at the hospital, more deeply than many who condemn out of hand. I do not assert my reasoning to be valid; indeed, 1 shall do no more than suggest the lines of such reasoning. Christian belief in the immortality of the soul does but strengthen the view that, if there is conflict between body and soul, the corruptible body ought to yield. Some have argued that to remove organs is mutilation - but "if thine eye offend thee . . ."? In truth, if the soul is feminine, this operation is a species of healing. But all this is an argument that need not be made; for nearly all Christians agree that man has free will to choose Heaven or Hell and the way thereto. When the hospital imposed their religious views upon me, without so much as a call from the Chaplain to learn mine, they denied me the exercise of that free will.

And freedom, both religious and secular, was denied me, by that hospital specifically, and by every hospital tacitly, that refuses to allow the operation. It is necessary to be very clear about this. What is this freedom we cherish? Someone has said that to define freedom is to limit it, and to limit it is to destroy it. This is not quite true. There is one, and only one, necessary limit to freedom: one must not exercise it so as to infringe on the rights of others. Thus one may not put arsenic in the salad, or sell atomic secrets to smiling Soviets, or run down old ladies with one's car. There is no other rightful limitation of human freedom. As to defining freedom, it can be said at least that it is not a negative thing, not "freedom to conform" or "freedom from want"; a slave has those - and still he is unfree. Freedom is the right to choose, to act, to pursue one's happiness. "The philosophy of the First Amendment is that man must have full freedom to search the world and the universe for the answers to the puzzles of life" - so

wrote one great jurist; and another: "The essence of an individual's freedom is the opportunity to deviate (from the norm)."

I searched for an answer to the puzzle of my life, but the answer I found was denied me. I chose, but my choice was denied me. "Yes, but what you chose was abnormal," I hear someone say. And, yes, I agree; precisely so; a deviation from the norm. Freedom is freedom to differ, or it is nothing. No one would have been harmed by my attaining my happiness; I've no dependents except an indifferent cat. And Society, which has so much to fear from criminals and bombs and too much government, would certainly not be harmed by one woman, no longer young, having a cup of tea with a friend or growing a geranium in a pot. If the day comes in America when one who is different is condemned for that reason only, when courts (and hospitals) have no courage to defy such irrational condemnation, then freedom will be dead.

Ought you, reader, to be concerned about this, since you do not want - certainly not! - what I want? Of course you should, for freedom is indivisible. If it is denied to me in this, it is precedent for denying it to you in your deviation from the norm. Does the fact that what I want is wanted by few rather than many alter in the slightest degree my right to have it? If you love freedom, you should paraphrase Voltaire and cry: "I do not agree with what you do, but I will defend to the death your right to do it." I tried very hard to do it, and skilled men stood by to help me: but between me and the happiness I sought there stood a formless specter compounded of bigotry and self-righteousness and disrespect for freedom, supported by all the Little Timid Men - and it won. That's what is so horrifying - it won! We frequently hear an anthem rendered with spirit if not precision, which includes the inspired phrase, "the land of the free." But freedom here has been denied me.

To bring this tale to a close and up to date, this patient, after another year or so, did find a skillful surgeon abroad. The operation was successful as I was able to convince myself. This is a more contented person now.
Before discussing further the handicaps and plights of transsexual patients, an example of each of the three types (S.O.S. IV, V, and VI) may be in order..

Three different types of transsexuals

The first type to be described under "transsexual" would be one of the intermediate stages, one that wavers between transvestism and transsexualism, and in whom the cross-dressing is in all likelihood not of fetishistic but of basically transsexual origin. He lives as a transvestite but, if honest with himself, he would want to be sex-

changed, that is to say, operated upon. External factors or fears of pain may, however, prevent him from actually seeking surgery. With "dressing" and under estrogen treatment, he manages to live in reasonable comfort.

Such a person is Peter A. (who, however, much prefers to be called Irene). He is a rather well-known musician from Oregon, married for twenty-five years, with a grown-up daughter who knows nothing of her father's hobby. The wife knows and makes the best of it, but does not want to see him "dressed," except perhaps on occasion of a masquerade ball.

Peter is in his late forties, dark of complexion and with hair that is just turning gray, somewhat overweight, but with a skin that could be the envy of any normal woman. As a man, he is softspoken and gentle, though not an effeminate type. As a woman, he is attractive, fully believable, and could be taken for a school principal, a housewife, or a dowager.

He is an only child who had the desire to dress in girl's clothes from early childhood, was reared as a normal boy, and had a good education, graduating from college. He travels a good deal and then "dresses" as much as possible. Without it, he says, he would be "a nervous wreck." Estrogen medication is almost equally as necessary for him. After much experimentation, he has found the dose that gives him a calming effect, with slight fullness of his breasts, but that does not interfere too much with his potency. He claims to have satisfactory sex relations with his wife and with her only. He had rare homosexual contacts during his college days, but none since, although he thinks he might enjoy them.

When asked about the conversion operation, he admitted that if he were alone in the world, nothing could keep him from undergoing it. But as things are, he would harm too many people, could not continue in his profession, or preserve his present standard of living. Therefore, he does not consider surgery and a complete changeover. He manages to continue his present "pursuit of happiness" with "dressing" and estrogen. Peter's classification on the Kinsey scale (K.S.) would be a 2 or 3. On the S.O.S., IV.

Ricky V., in his late fifties, is more of a true transsexual. Genetically and anatomically a normal male, Ricky has lived and worked as a woman in a business office for seven years (and will therefore be referred to as "she"). She owns no male clothes. No one in the office knows of her true status. She has had one unhappy marriage as a male, has two children, now grown up, and is a grandfather. Ricky is most anxious to have corrective surgery in order to legalize her position as a woman and also to feel her body to be more in accord

with her mind. The presence of the male sex organs bothers her considerably. A psychiatrist agreed that the operation would be indicated in her case. So far, Ricky has been unable to accumulate sufficient funds to make a serious effort to be operated upon. With the help of psychological guidance and rather constant hormone (estrogen) treatments, she lives in a fair although somewhat precarious emotional balance. At present there is no sex life and Ricky would have to be called asexual and anorgasmic. Her past life, of which she hates to talk, was bisexual and would be a 3 on the Kinsey scale. The S.O.S. would show a rather typical V.

An example of a full-fledged transsexual, a S.O.S. VI, is that of Harriet, whose childhood in foster homes and similar abodes is related among the Case Histories. As this twenty-eight-year-old patient still, as this is written in 1964, lives and works as a male, he shall (for the beginning of his story) be referred to as such, and with the initial H.

Hoping to cure his TVism and TSism, H. married at the age of nineteen a completely unsophisticated, seventeen-year-old girl whose femininity he envied with irrational possessiveness. With the help of fantasies, he succeeded in fathering three children. Although a good provider as a successful salesman, the marriage was in an "off again, on again" state when he and his wife came to see me first. His transvestism (on the surface) was the principal stumbling block in the marriage and appeared much more prominent than any transsexual urge. (He admitted later that he purposely failed to mention his transsexual desires, fearing he might antagonize me as he had other doctors in the past.) Brave attempts to preserve the marriage for the sake of the children were doomed to failure. When H. told me that he had been under psychiatric treatment in his home town, I suggested that I consult with the psychiatrist by phone to get his psychiatric diagnosis and see what possibly could be done to calm his emotional turmoil with estrogen in addition to the psychotherapy he was receiving.

The doctor did phone me, but to my astonishment he took a nonmedical, strictly moralistic stand. "This man wants an operation," he said, priestlike, "and naturally we cannot tamper with our God-given bodies. His wife should leave him, children or no children. H. is a degenerate and a no-good scoundrel," or something to that effect. The doctor had no psychiatric diagnosis to give me. A letter in which I asked again his medical (psychiatric) opinion remained unanswered.

H., a deeply disturbed and bewildered young man, then told me that his sessions with this psychiatrist had been expensive hours of nothing but argumentation and berating on the part of the doctor without any psychological benefit to him . After every session he was worse than before.

Another psychiatrist examined H. later at my suggestion, found him to be nonpsychotic, of superior intelligence, a greatly disturbed transsexual for whom psychotherapy in present available forms would be useless, as far as any cure might be concerned. Operation was suggested.

Since H. had made two attempts at suicide, psychological guidance with estrogen treatment was undertaken in order to enable him to continue - though precariously - in a rather responsible job with a good enough salary, to save money for the operation abroad. Various attempts to have the operation performed in the United States had failed.H. was a slightly built, attractive, feminine-looking man, when examined in 1964, whose appearance is much more acceptable when in female dress. On Kinsey's hetero-homosexual scale, he could be classed as a 4 during his married life, but would now be a 6, that is to say, completely homosexually oriented. On the S.O.S. he is likewise a VI.

Early in 1965 the great day arrived at last and H. flew to Europe for the operation that was to change him into the woman that he wanted to be all his life. After an insufficient time at the hospital, following the rather major operation, and after an unusually strenuous plane trip home, H. arrived utterly exhausted but happy nevertheless. He had been compelled to travel as a man and being overanxious to get into female attire, he had unduly hurried the homecoming. Complications (an internal abscess) developed and some further surgery was required. At the end of the summer, however, a much improved and "deliriously happy" attractive young lady presented herself at my office.

A clerical position was soon procured and H. was evidently accepted and treated like any normal girl. The consequences of a not too successful operation, however, continued to cause a good deal of discomfort as healing was delayed. Otherwise life seemed good indeed and during the fall H. met her Prince Charming.

A responsible and understanding older man (a far cry from the seventeen-year-old girl of her past life) who is fully aware of the entire situation is now her devoted husband. They are planning the adoption of a child. Household duties have replaced office work and although some minor surgery may still have to complete the physical transformation, true happiness seems to have dictated the following words in H.'s most recent letter to me (November 1965):

I have found happiness that I never dreamed possible. I adore being a girl and I would go thru 10 operations, if I had to, in order to be what I am now. A girl's life is so wonderful. The whole world looks so beautifully different. The only thing that could add to my life now,

would be a baby girl. D. (her husband) says that after all legal matters are settled, maybe we will adopt one.

So far, this case seems to have found a happy ending.

Further handicaps of transsexuals

The difficulty in procuring surgical help is not the only plight of the TS patient. Any medical help, including hormone treatment, may be denied him by overcautious and overconservative physicians. Dr. Walter C. Alvarez said in one of his recent editorials: ". . . because of our national ignorance, prissiness, and lack of sympathy for a person terribly gypped by nature, no one will help." For these physicians (and they are usually quite unfamiliar with the problem) transsexuals are "mental cases" and should be under psychiatric care, possibly institutionalized. But, alas, the failure of psychotherapy to achieve any change in the patient's attitude is fully acknowledged by those who have had any pertinent experience. With a rather unprofessional antagonism, some physicians are known to have hurt these patients psychologically. Here is an example:

Recently, during an absence from my practice, a transsexual patient of mine was sent through an error to a doctor unfamiliar with the subject for which the young man consulted him, that is to say, to receive estrogen injections. Unfortunately, this doctor's sparkling ignorance was evidently combined with such unphysician-like manners that the patient wrote me as follows: "The doctor's attitude toward me was sullen and indignant, making me feel like some kind of terrible creature he did not care to be in the same room with. . . ."

Alas, an experience like that can be duplicated many times when an emotional reaction on the part of the doctor defeated the healer, the gentleman, and the scientist.

The family physician is often the first one to whom a parent brings the child who behaves differently from expectation. Usually he advises them to take the boy (or girl) to a psychiatrist. In adolescence, or later in life, the same may happen, and I was told again and again that the psychiatrist then diagnosed "homosexuality" and - at best - advised the patient to accept himself (or herself) as he or she was. The "gay" life, however, is no solution for the transsexual. He does not like it. He actually dislikes homosexuals and feels he has nothing in common with them. His loneliness therefore becomes more and more evident and painful.

Cross-dressing is a help, but not always and not enough. The law forbids them to "dress" and hold a job as a woman. Yet this would be

the most effective form of therapy (together with estrogen) until an operation can be had, provided the demand for it persists.

At least ten or twelve male transsexual patients that I could observe lived and worked as women in legitimate jobs, usually office work. Most of them still do at this writing, their true sex status unknown to their employers or associates. A few of them have been unusually successful in their work in spite of the handicap of their emotional instability. Sometimes I have wondered whether their success may not be due to a fortunate mixture of male and female traits in their psychological makeup (male logic and aggressiveness, plus female intuition). One such patient told me, in describing her work, "When I am engaged in a business deal, I still feel and act like a man."

Another patient, living after her operation the woman's life that she always wanted, once - as her surgeon related to me - bought a car from a used car dealer, and paid for it in cash. The salesman had assured her that she had made a good buy. After driving only a few blocks the car proved to be defective and could hardly be driven back to where it was bought.
The salesman listened to the complaint, but refused a refund or an exchange for a different car. "You have bought yourself a car, lady," was all he had to say. The "lady" saw red. With a "We'll see about that, you bastard," she proceeded to give that salesman the beating of his life. Perhaps with memories in her subconscious mind of the Chevalier d'Eon drawing his sword from under his petticoats to defend his honor, her masculinity, aided by army training, had evidently reasserted itself temporarily. She also got her money back.

To help patients in possible legal difficulties, and to give them at least some feeling of security when they go out "dressed" or live as women, I wrote a certificate that they were to carry with them. It read as follows:

To Whom it May Concern:
This is to certify that the bearer, ____ ____, is under my professional care and observation.
This patient belongs to the rather rare group of transsexuals, also referred to in the medical literature as psychic hermaphrodites. Their anatomical sex, that is to say, the body, is male. Their psychological sex, that is to say, the mind, is female. Therefore they feel as women, and if they live and dress as such, they do so out of an irrepressible inner urge, and not to commit a crime, to "masquerade," or to "impersonate" illegally.It is my considered opinion, based on many years' experience, that transsexuals are mostly introverted and nonaggressive and therefore no threat to society. In their feminine role they can live happier lives and they are usually less neurotic than if they were forced to live as men. I do not think that society is

endangered when it assumes a permissive attitude, and grants these people the right to their particular pursuit of happiness.Like all patients of this type, ____ ____ has been strictly advised to behave well and inconspicuously at all times and to be careful in choosing friends.

This certificate was actually used very rarely. In one instance, of an arrest on the charge of "impersonating," I was told that the policeman tore it up and threw it into the patient's face. In another instance, the detective was sympathetic and let the patient go. ("She" had been pointed out as a disguised man by a jealous friend.) In two other cases, my certificate procured dismissal in court. In one case, however, a conviction for "impersonating, " was obtained by the District Attorney who later on complained to the County Medical Society, of which I am a life member, about my certificate. The complaint was referred to the "Division of Professional Conduct" of the respective State Department and I was politely but firmly asked by two attorneys not to write such certificates any more. They may be adjudged illegal and therefore "unethical." And so, one little help for the transsexual's plight was nullified.

Another handicap for some transsexuals is their masculine appearance. With almost unbelievable energy, they attempt to alter it. A flat chest is the worst feature. If hormone treatment is too slow or not effective enough to produce the semblance of a bust, plastic surgery is employed. Their beards are removed by longcontinued electrolysis, applied occasionally also to body hair unless the latter can be influenced sufficiently by estrogen medication.

A large nose is made smaller and more feminine-looking. Exercises and massages are tried to change objectionable body contours. A beginning baldness and a receding hairline have been treated with implants of hair taken from other parts of the scalp. Voice training is resorted to in order to change a baritone into at least a contralto. In one instance, a successful operation reduced a too prominent Adam's apple and in another the shape of the chin was altered.

While all these measures are more often applied after a conversion operation than before in order to complete the transformation and perhaps satisfy the urge for more and more feminization, they illustrate nevertheless the transsexual's burden, which becomes particularly heavy if economic factors prevent some of or all these measures.

Another handicap for many transsexuals is their character and their behavior. From a so-called "character neurosis" to outspoken hostile, paranoic demands for help from the doctor, all kinds of objectionable

traits may exist. Unreliability, deceitfulness, ingratitude, together with an annoying but understandable impatience, have probably ruined their chances for help in more than a few instances. Many transsexuals are utterly self-centered, concerned with their own problems only and unable to consider those of anyone else. A surgeon wrote once to me: "Our experience is growing in regard to the fact that most of them (transsexual patients) are willing to do anything on earth before operation, but nothing at all afterwards."

On the other hand, there are also those patients who are touchingly appreciative, grateful, and eager to cooperate. They compensate the doctor for many of his disappointments. Alas, they seem to be in the minority.

Still another handicap for transsexuals is their rather frequent immaturity in thinking and acting. Driven by the pleasure of anticipation, they commit the most impractical errors. I have seen grown-up men in their thirties or forties waste their savings on trips abroad to surgeons they "heard about," without further information or appointments. Others have fallen victim to quacks and fraudulent nostrums and rarely learned by their experiences.

It cannot be surprising that among the dangers that transsexuals face, when frustration and unhappiness seem unbearable, are alcoholism and drug addiction. I have only wondered that these do not occur more frequently. In not more than three or four of my patients did I become aware of an alcoholic problem. Undoubtedly some others were carefully kept from me. In a few instances, excessive drinking was resorted to only when "dressing" had to be suspended. As soon as it could be resumed, liquor was no longer necessary.

The same may be true of drug addiction. I have found telltale marks of "main-lining" in only one instance, but the use of "goof balls" was occasionally admitted.

One tragic case is that of Joan. She was twenty-six when I met her and that was just after she had her conversion operation as well as plastic breast surgery. She was then a strikingly attractive redhead, vivacious, possibly somewhat reckless, making her living as a call girl and cocktail waitress. I lost sight of her for several years. When I saw her again, I was hardly able to recognize her. Her attractiveness was all but gone. She had lost much weight, had aged considerably, and looked sick. She had become a "goof ball" addict and was still "in the racket." One day, she was found dead in her furnished room. There was a vague rumor of suicide but no evidence. The medical examiner's office listed her death as "narcotic." In all probability, she died from an overdose accidentally administered when she experimented for the first time with an injection.

In a few instances under my observation, criminality complicated the transsexual's life. Aside from prostitution, there have been rare examples of theft, forgery, and attempted blackmail, however only before the operation had been attained.

The great majority of transsexuals, let it not be forgotten, are merely utterly unhappy individuals. Some of them have become misfits through their gender disorientation that neither society, nor the law, nor the medical profession at present understands and acknowledges as an undeserved misfortune.

Innumerable letters testify to the transsexual's often desperate plight. There are many, many in my files, some pathetically infantile, crude and uneducated, others highly sophisticated, intelligent, even brilliant.

Dr. Christian Hamburger of Copenhagen, Denmark received similar documents humains after his name was mentioned as Christine Jorgensen's physician. He published interesting statistics gained from 465 such letters and added abstracts from them. Many letter writers, for instance, complained about the treatment they had received from the medical profession. One wrote: ". . . here was no loving hand reached out to guide me. It was more like a doubled-up fist."

Dr. Hamburger came to the following conclusions:

These many personal letters from almost 500 deeply unhappy persons leave an overwhelming impression. One tragic existence is unfolded after another; they cry for help and understanding. It is depressing to realize how little can be done to come to their aid. One feels it a duty to appeal to the medical profession and to the responsible legislature: do your utmost to ease the existence of these fellow-men who are deprived of the possibilities of a harmonious and happy life - through no fault of their own.
(PLEASE READ THE LAST FOUR PARAGRAPHS AGAIN.)

"Each Day I Live a Lie," by Lorraine Channing, taken from Turnabout, Vol. 1, No. 3, illustrates and echoes Dr. Hamburger's words.

From childhood´s hour I have not been
As others were - I have not seen
As others saw - I could not bring
My passions from a common spring.
- Edgar Allen Poe: "Alone"

Each day I live a lie. Mine is a life of deceit, for I am forced to wear a mask, to be an actor on a stage not of my own choice. I cannot do . . . cannot act as I would like or as I feel.

Yet, I am not evil. I am not criminal.

I desire, in fact, to be good in the highest sense. I long to give, to help, to protect, to learn, to create, perhaps above all, to love. . . and to be loved.

I look about me and see all that I cannot be and cannot do. My heart cries with a pain like no other, for my deepest desires - to me, my most natural wishes - cannot be fulfilled. I am forced to be and act that which I am not.

I see other women. I see them with children and am reminded that I cannot bear children, cannot give them life. Children are to have and hold, to cherish and caress, to nourish and nurture. Without them, I shall always be incomplete. To be a mother, nurse, or teacher, to be close with children - all this is denied me.

Oh, to be and to live as other women do! To do the things they do, to go to the places they go - these are vital to me. I wish to dress as they do - to wear the clothes, the jewelry, the cosmetics, all the things they wear - these are symbols of their femininity, their womanhood, their very essence.

Would that I were as other women are! Yet I am not a woman either in body or in the life they lead. I am a woman in my soul, in my fantasy. In the deep recesses of my being, I am like them. Inside me, I am one of them. How can I be more in their likeness?

That is what I want, yearn for, seek more than anything. Now I live only incompletely. I am in a prison - the prison of my body, the prison of a society which does not understand.

Until I can become more like other women - if I ever can - I must live a lie, day after day. Physically I am a man; mentally and emotionally I am a woman.

I am a transsexual.

The Etiology of Transsexualism

The causes of transsexualism and the possible sources from which the desire to change sex may spring are probably the most controversial, puzzling, and obscure parts of this book. There is so far only the very

beginning of a type of scientific investigation that takes more than merely psychological aspects into consideration.

The possible origin of transsexualism is not discussed in the medical literature very often or in very much detail. Most frequently, there is the simple statement that the cause is unknown. Almost invariably, it is linked with that of transvestism and sometimes also with homosexuality, both giving rise to confusion.

The two principal theories are concerned either with possible organic, that is, biological (inborn) causes not necessarily inherited, or - much more often - with purely psychological ones.

Biologically minded authors are likely to consider TVism and TSism as "intersexual" phenomena but those are almost exclusively European scientists. American writers, as mentioned previously, reserve the term "intersexuality" exclusively for visible signs of disorders of sexual development, that is to say, for hermaphroditic and pseudo-hermaphroditic abnormalities. The Europeans, especially the Germans, use the term in a much wider sense, including not only transvestism and transsexualism as "intersexual" but also homosexuality. "Zwischenstufen" ("stages in between") was the term employed by Hirschfeld and his school.

Among the more modern writers, Helene Stourzh-Anderle, a Viennese physician, is outstanding with her remarkably erudite book, Sexual Constitution, Psychopathia, Criminality, Genius, published so far only in German. As a clinician, she favors a biological approach without, however, minimizing the great contributions made by Freud and his school.

In her opinion, TVism, TSism, and homosexuality are intersexual manifestations that could be combined with infantile (subsexual) features. All are anchored in an inborn sexual constitution and are caused by a "disturbed chromosomal sex."

Here, mention should also be made of the researches of Schlegel of Germany who found that "intersexual" types of men and women differed from normal types in the measurement of the pelvic outlet and also in the size and shape of their hands. Schlegel claims that in thousands of examinations, he has been able to prove this difference and therefore the existence of a constitutional factor in "intersexuality" to which - naturally - transvestism and transsexualism would belong.

In this country, psychology and psychoanalysis still dominate the field of sexual deviations. Many psychologists, particularly analysts, have little biological background and training. Some seem actually contemptuous of biological facts and persistently overstate

psychological data, so much so that a distorted, one-sided picture of the problem under consideration results.

Psychiatrists with biological orientation strongly disagree and even decry the exclusive psychoanalytic interpretations. But their voice is heard too rarely.

Two possible biological sources of transsexualism (and - not to forget - this book occupies itself principally with this phenomenon) are the genetic and the endocrine.

Genetic sources

No genetic cause has as yet been proved for any transsexual manifestation. In a few rare cases of the Klinefelter syndrome, being complicated by transsexualism (or vice versa), the usual genetic fault was found, the patients showing 47 chromosomes (instead of the normal 46), with a chromosomal constellation of XXY instead of XY. At the same time, there were the usual clinical findings (see Chapters II and III). All transsexual patients without complicating disorders so far reported showed a normal chromosomal sex.

Let us remember, however, that genetics is still a young science and our investigating methods may still be rather crude, compared to possible future methods. At present we have hardly lifted a corner of the veil that hides the mystery. It would well behoove us, therefore, to keep an open mind, remembering also that negative findings in medicine mean little as compared to the positive. The absence of findings does not negate their possible existence.

A recent valuable article in the British Journal of Psychosomatic Research, "Karyotyping of Transsexualists," by J. Hoenig and J. B. B. Torr, reports genetic studies on thirteen patients with transsexualism. The authors came to these conclusions: "None of the patients showed any signs of hermaphroditism or other physical abnormality. No chromosome abnormalities were found. These negative results do not exclude the possibility that chromosome abnormalities are associated with this condition."

Future investigations dealing with transvestism and transsexualism may incidentally supply valuable research data for the understanding of the nature of sex in general and may well clarify its riddle, correcting some of our present concepts.

We are still used to speaking of a "male" when there are (or were) testicles and a penis, and of a "female" when there are (or were) ovaries and a vagina. As we have seen, the geneticist has now added to our knowledge the "chromosomal sex," which is not always the

same as the anatomical. How many unknown factors may still await elucidation, nobody can tell. Even the term "transsexualism" may prove to be inappropriate if it should ever be shown that an anatomically normal male transsexual may actually be a genetic female, or at least not a genetically normal male. In such event, we would be dealing with a transgenital desire instead of a transsexual.

In a recent important and learned treatise, A Periodic Table of Sexual Anomalies, the authors, Drs. M. M. Melicow and A. C. Uson, briefly discuss transsexualism to which, however, they still refer as (the better known) transvestism. Speaking of the possible etiology, they say:

The cause of the sexual aberration is not known. One may postulate that there is a gene in the sex chromosomes which has to do with the identification and feel of maleness or femaleness and that this sex gene is intimately attached to Y chromosomes in males and to one (or both) of the X chromosomes in females. If the bond is broken up, then the sex identification gene, which ordinarily is intimately attached to the isosex differentiation gene, may become transposed and attach itself to the heterosex differentiation gene, resulting in a transvestite. (Iso-equal.)

A theory such as that would indeed explain much better than psychological "conditioning" the astonishing depth and the intensity with which a transsexual identifies with the opposite sex. Incidentally, it would also explain the resistance to treatment.

Per Anchersen, head of the department of psychiatry at the City Hospital of Oslo, Norway, briefly discusses etiology in his paper "Problems of Transvestism."

He has himself examined six transsexuals to whom, however, he refers as "genuine transvestites," using Hamburger's terminology. He found no symptoms of "primary mental disease." He feels that bisexuality, some forms of homosexuality, and transvestism are "different stages along a line of sexual deviation."

Two of the transvestites were a monozygotic pair of twins. "From their early childhood they behaved like girls." After their sixteenth year, they "have been working separated in kitchens." . . . Both "stressed their aversions to homosexual men . . . " one of the twins urgently wished to change his sex, the other preferred to wait and see how his brother was going on . . . . "Intellectually both were retarded with an I.Q. of 74."

This seems so far the only case of identical twins among transsexuals reported in the medical literature. 1 have seen none among my own patients.

Anchersen quotes Kallmann from his studies of homosexual twins as follows: "In 40 monozygotic pairs of twins there was not only a complete concordance concerning the homosexuality as such. Even the development and the performance of the sexual activity were quite identical. . . . In many cases, the twins lived separated from their early childhood."

Albert Ellis, the noted psychologist, disagrees and says:

If homosexuality is a directly inherited human trait, it could reasonably be expected that the fathers of homosexual twins would also, in a very high percentage of cases, have distinct homosexual histories. Since this was not found and since there is no other evidence showing that homosexuals have fathers, uncles, or other male relatives who, in a significantly high percentage of cases, also prove to be homosexual, it seems highly unlikely that true hereditary factors are directly involved in homosexuality. Congenital factors, possibly, but hardly hereditary ones.

Per Anchersen himself concludes: "the homosexuality manifested in the genuine transvestite seems to belong to the constitutional form."

Endocrine sources

A possible endocrine cause of transsexualism has been investigated in a few cases with great thoroughness. Beyond a few suspicious findings, no definite proof has as yet been found. It may or may not have an endocrine significance that among my 152 male transsexuals, nearly 40 per cent were found to have more or less distinct signs of a degree of sexual underdevelopment (hypogonadism), as was mentioned previously. In such a condition, the pituitary as well as the gonads may be at fault with, of course, an inborn reason behind it.

A few years ago the American psychiatrist, Robert J. Stoller, and his collaborators reported the case of an evidently transsexual man who had a typically feminine body build with feminine hair distribution, but with testes and a normal penis and without internal female organs as revealed through laparotomy. Nevertheless, there was "evidence of continuing estrogen influence from a source which has not been determined . . . The microscopic examination of testicular tissue has failed to reveal estrogenproducing cells."

Schwabe and his collaborators, however, reported shortly afterward that in another, probably transsexual male, large amounts of estrogen (more than double the normal) were found in the testes. The hormone-producing Leydig cells were held responsible for this estrogen production.

More investigations have been made along these lines with negative or doubtful results and still more are in progress. It must not be forgotten that transsexual patients are not too frequent and that reliable scientific studies can be made only where the necessary facilities exist, that is to say, through hospitals, laboratories, and research institutes.

In recent years, evidence has accumulated that hormone medication during pregnancy can have serious consequences for the newborn. If the mother was given testosterone or progesterone for any length of time during her pregnancy (usually to prevent abortion), genital deformities of the newborn may result and have resulted if the genetic sex of the baby was female. Pseudohermaphroditism was the consequence.

Here, a thought is bound to occur: What if the fetus is a male? It is normally under the influence of the mother's female hormone (her estrogen) for nine months. Could that, under certain circumstances, interfere with the development so that the maleness of the newborn is repressed and a too feminine or underdeveloped infant is born? Maybe the mother's progesterone and her small amounts of testosterone could, and probably normally do, act as a "brake," neutralizing the estrogen, or a metabolic conversion takes place automatically somewhere in the body. (Liver?) But maybe this does not always happen. Maybe an especially sensitive "sex center" in that small brain somehow becomes impaired in its development, either in its structure or in its chemistry, by the maternal estrogen. Could that explain why there are so many more male transsexuals, transvestites, and homosexuals than female?

A child's brain is different from an adult's. The brain waves of an encephalogram do not begin to show an adult pattern until the child is four years old or even older. What may be harmless to an adult may be detrimental to the young child. For instance, estrogen.

The female transsexual naturally would need a different explanation, if the mother's endocrine status during pregnancy is being considered. Could an abnormal conversion of estrogen into testosterone take place so that a disturbed chemical mechanism underlies the biological one? Speculation may be allowed in an area that is still as obscure as that of gender disorientation from earliest childhood on. A new line of observation and investigation may have to be opened up.

Another interesting observation, neither genetic nor endocrine, but nevertheless organic, was made some years ago by three American public health physicians, Drs. E. G. Williams, J. D. Reichard, and M. Pescor. It concerned the reaction of the nervous system to Prostigmin, a rather powerful drug that acts directly on the nerves.

Normal males and females react alike. So do homosexual males. The drug, however, had no affect at all on the nerves of "feminine men." According to the authors, this may indicate a possible inborn physical trait having to do with an enzyme that takes part in the chemical reaction through which nerves stimulate muscular action.

To the best of my knowledge, these experiments have not been repeated as yet and therefore no confirmation or elaboration of the observation is available. In the light of the following paragraphs, however, they seem to gain particular significance.

Related to the genetic as well as the endocrine possibilities of etiology is a most recent one, coming from Williarn C. Young and his group at the Oregon Regional Primate Research Center. It may be termed the neural or cerebroneural one. The neural structures and brain centers are the "target," that is to say, receiving organs for hormonal influences. Their genetic quality can decide how these hormones may affect them.

The Oregon group, working largely with monkeys, point to the "mechanism of hormonal action in organizing the tissues of the central nervous system." They say, "Evidence has accumulated indicating that the gonadal hormones have a broad role in the determination of (sex) behavior" through their "differentiation or organization of neural tissues."

And so, after fifty years and more, the fundamental experiments of Eugen Steinach of Vienna, who masculinized castrated females by implanting testicles and feminized castrated males through ovarian implants (and later female hormone injections) have found a modern substantiation, explanation, and elaboration.

Recent brain research has likewise revealed possible pertinent facts. A frontal lobotomy, for instance, severing connections between the cerebral cortex and certain parts of deeper, more primitive centers (of the limbic system) sometimes results in bizarre and uninhibited sexual behavior. On other occasions, in clinical work, for instance, the lobotomy eliminated such behavior.

With the help of exceedingly fine electrodes inserted into the brain structure, response to stimulation could be tested. Moving these

electrodes only a fraction of a millimeter, either fear or anger or sexual excitation would be elicited.

The possibility of other organic causes may be thought of, such as early encephalitic infections or brain injuries at birth, but no evidence along such lines has as yet been found.

However, a report recently came from Dr. Roger A. Gorsky of the Brain Research Institute of the University of California at Los Angeles that may prove to be of greatest importance. Dr. Gorsky, as reported in Science Newsletter found that at least a portion of the brain, known as the hypothalamus, is inherently feminine.

"Unless there is testicular tissue secreting testosterone during this period of development to organize this portion of the brain along masculine lines, it remains forever feminine."

Since the hypothalamus has much to do with the regulation of the pituitary function, secondary endocrine anomalies could well occur.

A psychic trauma, too, seems to have produced a period of transvestism. A case has been reported to me of a man who had never previously been a transvestite; but after the sudden death of his father, he turned to cross-dressing. After a few months, the desire disappeared as suddenly as it had started. It seems likely, however, that the tendency toward TVism existed as a latent or suppressed condition and the psychic shock merely "triggered" it into reality. Such a psychic mechanism may be operative to explain occasional actions of the "pseudo-transvestite" (Type I in S.O.S.).

Psychological causes

The possible psychological causes of transsexualism have received much more attention and also more endorsement than those that could be called "organic" (at least in the American literature). Among those causes, the phenomenon of imprinting should be mentioned first.

Imprinting

This is a form of learning in earliest childhood, at a critical period of development, roughly between eighteen months and two and a half years. This theory is based on convincing experiments originally conducted and described by the Austrian zoologist, K. Z. Lorenz. They may accidentally have a parallel in humans.

Green and Money of Johns Hopkins School of Medicine have this to say:

Imprinting is triggered by a specific perceptual stimulus which can be varied within certain limits. Lorenz' classic experiment demonstrated that the mother-following reaction in newly-hatched mallard ducklings can be manipulated experimentally to become imprinted to any substitute object that has the correct height-width ratio and moves. When he squatted and substituted himself for the duckling's mother, the birds followed him, and only him, around with the same devotion they would otherwise exhibit for their own mother. Lorenz similarly imprinted newly hatched jackdaws and found that when these birds reached sexual maturity, they imprinted not another jackdaw but a human being as sexual partner, courting either Lorenz or some other person.

Green and Money then continue to draw these conclusions:

Aberrations of gender role may represent misprinting, so to speak, 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. Among animals, good and poor imprinters can be bred. Perhaps, therefore, those human cases of gender role disorder which come to our attention are examples of people especially prone to fall victims of their particular environment.

The authors very clearly indicate here the possibility of an inherited predisposition for imprinting and naturally for its consequences. They found among their patients an "infrequency of forceful parental dominance in the household" and also "the relatively fragile body build of many of these boys."

This again combines imprinting, a psychological factor, with body build, a physical attribute.

The difficulty of proving (not only assuming), imprinting lies in the fact that parents may not remember the details in their households during the very early lives of their children and the patients themselves can hardly help. But their incongruous gender role is already recognizable when they are still very small.

Childhood Conditioning

In the scientific literature, the psychologically harmful influences in childhood, so-called "conditioning," are the most frequently mentioned

and most widely accepted causes of transvestism, transsexualism, as well as homosexuality.

Literally, or in substance, here are statements that were made to me by transsexual patients:

I know my parents were disappointed when I was born a boy. They were so much hoping for a girl.
My mother wanted me to be a girl and secretly dressed me as a girl and brought me up that way till I was old enough to go to school.

I am an only child and I was pampered by my parents. They let me play with the toys I wanted and they were the ones that girls prefer, like dolls, etc.

I was raised the only boy among five sisters and I was always envious of their nice dresses and wanted to be like them.

My parents were divorced when I was very young and I hardly knew my father. My mother raised me. . . .

My parents died when I was very young and my grandparents raised me and let me have my own way.

I remember, my mother occasionally punished me for something I had done by making me wear my sister's dress to humiliate me.

I was never a "real boy" and my father wanted to make me one. He hated me for my lack of masculinity and showed me his dislike. He always preferred my sister and gave her all she wanted. I envied her. I hated my father and I still hate him.

Many similar early histories of transsexuals as well as of transvestites could be gleaned from the literature and certainly from my private correspondence. (See also the case histories in R. E. L. Masters' chapter). Lukianowicz in his comprehensive survey not only relates some of his own observations, but quotes at length those of other authors. The possibility should, however, not be overlooked, that some of these patients may prefer such explanation to an inborn one and therefore allow a wish to be the father of their thought.

Buchner found among his 262 TVs (with a small but unknown percentage of TSs) the following:

Family Background	Percentage

Parents divorced or separated before 18	18
Father good masculine image	75
Father dominant	52
Mother dominant	42

These figures are based on the first eighteen years of life. Taking a more vital earlier period, conditioning may be much more important. "Janet Thompson" says: "It seems evident to me that the inception of TVism falls in the one- to five-year-old period of the child' s life as a result of faulty, incomplete, or distorted sex identification."

There can be no doubt that unfavorable early childhood experiences can constitute truly corrosive emotional traumata. That can neither be denied nor minimized. Yet, for the sake of scientific objectivity, it should be repeated here that many similar histories from the first few years of life can be elicited from persons who grew into perfectly normal adulthood later on. Those histories rarely become known, simply because "normal," well-adjusted men and women do not go to psychologists as a rule and one would have to look among one's friends and acquaintances for examples. With a little effort, they would be readily available.

We all know men who lost their fathers at an early age, devoted their lives for years and years to their mothers, and by all psychoanalytic theories should have become homosexuals, transvestites, or transsexuals. But they did not. They had girl friends off and on and married as soon as the mother had passed away. It seems to me that conditioning cannot be the whole story. Unless there is a constitutional weakness, conditioning won't "take."

Around the turn of the century, it was widely customary to raise boys almost the same as girls. They kept their long curls and wore dresses till they were five or six, that is to say, during rather critical years. Winston Churchill was one of those children, according to early pictures of him. Were there more transvestites, and the like then than there are now? Certainly not.

A question of cause and effect should be raised in this connection. Could it not be that a constitutionally rather feminine-looking boy "conditioned" his parents so that they were inclined to forget about the tiny sex organs and reared him as a girl until it was time to send him to school? Especially if they had hoped for a girl?

" He always looked and behaved more like a girl than a boy," is the explanation that parents gave to me to justify their errors.

Whenever "conditioning" went against a healthy boy's true nature, no harm was done. As soon as he was old enough, he would rebel against the girl's dresses, because he wanted to be like all the other boys. But when the false upbringing harmonized with a constitution of a high feminine component, then it was a different story. Then the ground could have been laid for a future sex and gender disharmony.

In one case that I observed some years ago, a kind of reverse situation actually seemed to exist. The parents were very glad to have the boy that was born to them, but at the age of three or four the child became very unhappy and difficult and wanted to be dressed and treated "like all other girls." The parents and two older sisters fought for a son and a brother, but finally had to give in to keep the peace. They allowed the little boy to wear girl's dresses, but insisted on a regular boy's haircut. These constituted the most distressing moments in the boy's life.

Finally, he had to go to school as a boy and grew up into an extremely feminine-looking transsexual and transvestite. Desperately clamoring to have a conversion operation performed, he was studied by two groups of psychiatrists at the University of _______. One group recommended the operation as the only way to protect the patient's sanity. The other group advised against it, because they considered it unlikely that it would solve the underlying psychological problems. Psychotherapy was attempted for a short time, but failed, perhaps owing to the patient's lack of cooperation. With financial help from the mother who was sympathetic toward a change, the patient at last went abroad and succeeded in realizing his life's ambition. The operation was performed, but only partially so. For unknown reasons, no vagina was constructed at that time.

In spite of that defect, the patient seemed more contented and emotionally better balanced when I saw him several weeks after the operation: better, at least, than on a visit to my office two years prior. He went to work as a woman, but the desire to become more complete never left him. After another two years, he returned to Europe for his vaginal plastic. The last I heard was that the operation was not successful because a fistula formed between the artificial vagina and the rectum. A further operation, however, may in the meantime have corrected this condition.

In any event, this case seems to prove that an unknown constitutional factor was at the bottom of the gender disorientation and that "conditioning" evidently played no part in this instance.

As reported in a lecture at the Albert Einstein College of Medicine (Jacobi Hospital) in April 1964, in 122 cases of male transsexualism among my own patients, conditioning in childhood could be shown in

twenty-five cases (20 per cent). To this figure we may possibly add thirty-two doubtful cases (26 per cent). In 64 cases (56 per cent), no evidence of conditioning could be found. (In three cases, the early history was unknown.)

C. V. Prince, editor of Transvestia, also investigated the probable frequency of conditioning by sending out questionnaires to 166 known transvestites, containing an unknown but small number of transsexuals. Conditioning was reported in "fewer than 20 per cent," according to Prince, who published his findings in Sexology Magazine.

More recently, H. Taylor Buchner, from the Survey Research Center of the University of California, who had sent out a quesionnaire to 262 subscribers of Transvestia (mostly transvestites) reported the following data as far as the problem of conditioning is concerned:

Childhood	Percentage
Treated as a girl because mother wanted a girl	4
Made to wear dresses as a punishment	3
Kept in curls longer than other boys	6
Treated just as any other boy, as far as can be remembered	84

Summarizing my impression, I would like to repeat here what I said in my first lecture on the subject more than ten years ago:

Our genetic and endocrine equipment constitutes either an unresponsive, sterile, or a more or less responsive, that is to say, fertile soil on which the wrong conditioning and a psychic trauma can grow and develop into such a basic conflict that subsequently a deviation like transsexualism can result.

To express it differently, our organic sexual constitution, that is to say, the chromosomal sex, supported and maintained by the endocrine, form the substance and the material that make up our sexuality. Psychological conditioning in early life would determine its final shape and individual function. The substance is largely inaccessible to treatment. The function alone would be the domain of psychotherapy.

Nonsurgical Management of Transsexualism

The management of transsexualism is, in the majority of cases, radically different from that of transvestism. Although this volume does not deal with transvestism specifically, a few remarks as to the

therapy of this less serious deviation, in comparison with TSism, may be in order.

Therapy in transvestism

The true transvestite as a rule does not want any treatment. Doctors do not see them except in rare instances. They want nothing from the medical profession. They merely want to be left alone to pursue their own particular form of happiness, that is to say, "dressing," and rather want society to be treated educationally so that a more tolerant attitude would gradually emerge.

There are instances, however, when transvestism may be a great handicap for the patient and he would then be ready to undergo treatment with the hope of being cured of his strange and embarrassing compulsion. He may be in love with a girl whom he wants to marry and who would not tolerate transvestism.

He may be disturbed and annoyed with himself or feel that his job is endangered. Or his family may have found out and may urge him to seek psychiatric help. Psychotherapy, possibly with hypnosis, would then be the method of choice, and if the patient persists long enough in an honest wish to be cured ("honest" at least in his conscious mind), success may be attained. There are former transvestites who claim that they have overcome their desires, but relapses have occurred so often that the state of an actual cure must, at least for the first few years, be considered uncertain.

Furthermore, a form of "substitute" deviation or neurosis may develop. Overt homosexual behavior or alcoholism have in some instances taken the place of the former cross-dressing and a return to it may finally be the lesser evil.

The form of psychotherapy applied in transvestism depends entirely on the attitude of the therapist. He may be permissive and merely guide the patient to accept himself as he is and to live with his peculiarity without getting into trouble with society or the law. That, of course, would not be curative. Or, more often, he may use almost any kind of psychotherapy, including deep and long-continued analysis or hypnosis, for effecting a cure.

For any success, much will also depend upon the atmosphere in which such patients continue to live. Part of the curative treatment would have to be removal from transvestitic temptations, friends, transvestitic literature, and the like, as completely as possible. To

continue in the old surroundings would be like trying to treat an alcoholic inside a brewery or a bar.

Transvestites are known to have stopped "dressing" completely while in the armed services, although frustration may have been more or less severe. But a return to transvestism was almost unavoidable when they returned to their former environments or even to ordinary city life.

The alcoholic may join Alcoholics Anonymous and may find help that way, but the transvestite has, at least as yet, no parallel institution to cling to. Wherever he goes, he is surrounded by attractively dressed women whom he envies passionately, by lingerie shops, by shoe stores (fascinating if he is a shoe fetishist), and so on. The enticement is all around and his plight is a serious one. He would have to retire to a lonely island to be free from outside temptation.

It has been said that transvestites can simply use will power and stop "dressing" and then they will be cured. That is nonsense. Many have tried, have burned their female wardrobes, "purging" themselves, so to say, but without psychiatric or other help, a relapse was almost unavoidable. If the transvestitic urge (no matter whether basically fetishistic or latent transsexual) is forcibly suppressed, it is likely to find a different outlet through some other, perhaps more serious neurotic syndrome unless, of course, it is successfully treated psychiatrically, or a completely new interest such as marriage to the right kind of girl will prove strong enough to act as a cure.

The uncertainty of psychotherapeutic results is illustrated by some new and rather outlandish form of therapy that was recently publicized in the medical as well as the lay press. It has been called "Behavior" or "Aversion" therapy.

The transvestitic patient is given an emetic drug (such as apomorphine). As soon as nausea develops, he has to view slides of himself dressed as a woman, prepared beforehand, and at the same time he has to listen to tape recordings describing in detail the mode and technique of "dressing." This form of treatment continues until vomiting occurs or acute illness prevents continuation.

Success has been claimed for this rather brutal and humiliating form of brain-washing, but the time of observation for the "cure" was, at the time of the report, only three months. And will such violent and undignified interference with an emotional life not again produce other, perhaps more serious substitutional symptoms?

Less degrading, although likewise rather brutal is the new type of aversion therapy utilizing painful electric shocks in place of the nausea.

Patients are subjected to these shocks whenever they do something they are not supposed to do, for instance, enjoying women's finery, dressing in some, but also having homosexual inclinations, indulging in various sexual deviations as well as drinking or smoking too much. All these things are treated as bad habits. Successes are reported from England but confirmation is still lacking.

Whether aversion treatments can be applied to transsexuals and with what result is not known.

A comparison with Antabuse in the treatment of alcoholism readily comes to one's mind. All transvestites, transsexuals, and alcoholics are problem personalities. If the emotional disturbance behind these personality disorders are rather superficial, an equally superficial symptomatic success may be accomplished at least for a while. But it seems to me that any more deep-seated disturbance (perhaps constitutionally anchored) would be quite unresponsive to this kind of aversion therapy, at least as far as any lasting benefit is concerned.

The transvestitic urge (fetishistic or transsexual) contains an element of addiction. Larger "doses" may be required for certain individuals as time goes on. Therein may lie a "progressive" nature of TVism in some instances. If untreated and uncontrolled, "dressing" may be desired more and more frequently and even the idea of physical changes through hormone treatment or through an operation may be gaining ground, particularly in unfavorable - that is to say, constantly stimulating - surroundings. Here psychotherapy and proper guidance at the right time may help, provided a transsexual tendency is not too deep-seated.

Such seemingly progressive aggravation of transvestism was rarely noticed under treatment, although it did apparently occur in a few cases. However, later on, these patients proved to be initially unrecognized transsexuals. The opposite was more frequently observed: under estrogen medication, the desire to "dress" became often less demanding and less sexual and the inability to indulge grew somewhat less frustrating. The explanation probably is that the libido was reduced in its intensity through estrogen and since the transvestitic urge is part of the libido, it was likewise lowered. But I am anticipating a later discussion.

The foregoing paragraphs (if repetition may be permitted) apply chiefly to that form of transvestism that is its own purpose, which is to say that it is not the chief symptom of transsexualism. As soon as physical changes are desired, it ceases to be true transvestism, and inclines toward transsexualism (Type IV of S.O.S.; table on page 22). The full and complete transsexual (S.O.S. V and VI) finds only temporary and partial relief through "dressing." I have even met

transsexuals who would not "dress" at all."What good is it?" they said; "it does not make me a woman. I am not interested in her clothes; I am only interested in being a woman." That is the true transsexual sentiment.

Psychological guidance in transsexualism

If the transsexual does find relief in "dressing," to do so would be the first logical advice to be given therapeutically. Its permissive character can be questioned by those who may think of the law before they think of the patient, or who may have insufficient experience along these lines, or who are the type that, automatically, favors prohibition. Too many individuals are that way; what they do not like must be forbidden and punished. Then they are satisfied. I have even met transvestites who dislike (or pretend to dislike) transsexualism so much that they are against estrogen treatment and operation (for reasons of self-protection?). There are also transsexuals who dislike transvestites as well as homosexuals. Intolerance can be found in strange quarters.

It is my hope that this volume may induce doctors as well as laymen who may come across the transsexual phenomenon to assume a tolerant and rational attitude and let the light of facts replace the ever-present twilight of prejudices. Walter Alvarez was right when he wrote in one of his newspaper columns in sympathy with a transsexual that he had met:

I know that for having written this column, I will get a number of vituperative letters from people who will think that I am foul-minded. No, I am just talking about these people dispassionately and scientifically. Let all of us who tend to look on these people as vile, remember that their mixup was obvious in early childhood when, surely, there was no vileness. We must all learn to have sympathy for these persons who were so badly gypped by Nature. But for the grace of God, we too might be caught in the same cruel trap.

Living completely as a woman (though illegally) can actually be a life-saving measure for those transsexuals who find an operation unattainable. I know at least a dozen who are in this situation right now. They work as women in offices, factories, beauty salons, as nurses, domestics, and some, alas, as prostitutes, all quite unknown to their employers, associates, or clients. They would best have psychological as well as medical help in addition to living in their

female gender identity; but very few actually have such help. Merely the opportunity to talk to somebody about their problems has its therapeutic value. To find some understanding from a doctor instead of coldness, rejection, or ridicule goes a long way toward easing their burden.

Psychotherapy in transsexualism

Psychotherapy with the aim of curing transsexualism, so that the patient will accept himself as a man, it must be repeated here, is a useless undertaking with present available methods. The mind of the transsexual cannot be changed in its false gender orientation. All attempts to this effect have failed. Dr. Robert Laidlaw, chief psychiatrist at Roosevelt Hospital, New York, has studied a number of transsexuals and has come to the conclusion that "psychotherapy has nothing to offer to them," as far as any cure is concerned. In numerous conversations and in psychiatric reports, Dr. Laidlaw considered the transsexual's state "inaccessible to psychotherapy." Dr. John Alden, a prominent psychiatrist in San Francisco, fully concurs with this opinion and has repeatedly stated so. Numerous other psychiatrists aggree, to my own personal knowledge. (See psychiatric reports in Chapter 7.)

In my own practice, I have seen ten or more patients who have been in analysis for as long as three and more years without the slightest change in their transsexual attitude.

Since it is evident, therefore, that the mind of the transsexual cannot be adjusted to the body, it is logical and justifiable to attempt the opposite, to adjust the body to the mind. If such a thought is rejected, we would be faced with a therapeutic nihilism to which I could never subscribe in view of the experiences I have had with patients who have undoubtedly been salvaged or at least distinctly helped by their conversion.

This help has been given by two therapeutic measures aside from psychological guidance and living as a woman: first, estrogen medication and second, surgery. Most of the time, both.

Estrogen therapy

Estrogen, the principal female hormone, in sufficient dosage over a sufficient length of time, acts on the male body in two ways. It produces partial chemical castration and hormonal feminization. Both

are temporary results unless treatment is continued for years. Then some permanent changes like a degree of testicular atrophy and more or less distinct gynecomastia may remain. Ordinarily, however, when estrogen treatment is discontinued, a return to the former state can gradually be expected.

I know of one patient who was moderately feminized by estrogen but, being bisexual and not a true transsexual, fell in love with a girl, gave up the idea of sex change, married, and now has two children. The question remains whether he will stay free from transvestism, and for how long.

The clinical results of estrogen (to which I usually add progesterone), can be dramatic for the deeply disturbed transsexual. These results are by no means entirely psychological as may be suspected. They are also distinctly endocrine. The hormonal castration produced by estrogen reduces androgen (testosterone) output and activity. In consequence, it lowers libido, it calms the patient, and acts as a biological tranquilizer. The transsexual drive, being part of the transsexual's libido, decreases in intensity, although in the "intensive type" (S.O.S. VI), not always sufficiently to give the necessary comfort. Then ordinary tranquilizers may have to be added.

Side effects of estrogen therapy, most of them greatly welcomed by the patient, depend upon individual responses, upon dosage, and chiefly upon length of treatment. Foremost among such side effects is breast development, the appearance of which provides tremendous emotional relief to the transsexual patient. The degree of gynecomastia that may be achieved depends upon the patient's constitutional physical build, that is to say, the amount of glandular breast tissue that is present and could respond to estrogen and progesterone, the breast being the target organ for these hormones. A further important factor is how readily an underweight patient may gain weight and in this way increase the fatty part of the breast.

It may take many months, even a couple of years, to develop a breast that would resemble that of an average, normal female. Chest measurements must naturally be correlated to body weight and can show increases of five or more centimeters a year with weight being constant.

Frequently transsexuals are too impatient and insist upon quicker results through breast surgery with implants of various kinds. The outcomes are not always satisfactory. I have seen bad infections develop, painful and abnormally hard breasts, but also satisfactory results that helped the patient's emotional status. At best, breast surgery is a gamble.

Accompanying the development of the breast is an increase in the size of the nipples and a distinct, measurable increase in the areola, the pigmented area around the nipple. Oversensitiveness of the nipple, sometimes to the point of discomfort, occurs with some regularity, especially during the first few weeks of estrogen therapy. Gradually, however, the sensitiveness subsides, or dosage would have to be reduced.

Another side effect of estrogen therapy concerns hair growth. Body hair almost invariably decreases and after enough time actually disappears, with the exception of pubic and axillary hair. The beard is rarely affected and would have to be removed by electrolysis. Scalp hair is favorably influenced. Usually it grows faster and heavier; baldness may or may not be prevented; probably this is dependent upon hereditary factors.

I have often seen skin texture improve distinctly under estrogen medication and an acne condition was occasionally cured.

Fat may shift from the shoulders to the hips in feminine fashion so that hip measurements increase by as much as five to seven centimeters within a year's time, in spite of stationary weight.

Strikingly affected are the sex life and the sex functions. Within a few weeks of treatment, some patients report they no longer feel like masturbating, their sex urge, including the desire to "dress," being much reduced. There are no or fewer involuntary morning erections and after six months or so, voluntary erections also become difficult to elicit and about one out of ten patients describes them as distinctly painful. If orgasm can still be reached, there is in more than 50 per cent of the cases no ejaculation, which may to a large extent be due to prostatic shrinkage.

The physical examination reveals a reduced size of the prostate and after about a year of treatment a somewhat smaller penis also (from disuse?) and perhaps a moderate testicular atrophy. The 17-ketosteroids almost regularly sink below the normal level of the female. Abnormally large estrogen values are found in the urine.

All these changes make the transsexual happy, as he despises each and every manifestation of male sexuality.

This may be the occasion to mention the fact that, in about one quarter of my patients, androgen in the form of testosterone injections had been administered at some time in the past, the doctor evidently hoping to cure the transsexualism and the effeminacy of the patient through masculinization. Alas, it is the wrong treatment. The conflict is aggravated when the body becomes hairy and the libido increases

without, of course, changing its direction. Androgen is to my mind contraindicated in male transsexualism.

In hypogonadal young boys, an attempt may be made to help the maturing process through injections of the gonadotropic hormone of the pituitary (APL). Hoping to influence nature in this direction, I continued in a few cases weekly injections Of 500 to 2000 units for several months, but saw no influence on the transsexual drive.

Estrogen therapy is either given as the substitute for a conversion operation or, in accordance with the suggestion of Hamburger et al., in preparation for the operation in order to test the patient's psychological reaction to feminization. "Let us have it on a temporary, reversable basis first, before an operation would make it irrevocable," has been my argument.

Per Anchersen suggests the following: "Treatment with oestrogen hormones to suppress the internal secretion of the testicles and in this way try to feminize the patients by a hormonal castration. This treatment must always be tried for a long time before one decides on a surgical castration." Close observation and repeated examinations are essential during treatment. Liver function tests may be advisable, the so-called BSP (bromsulphtalein) being probably the most valuable. The liver is the organ that metabolizes ("digests") the estrogen and it is conceivable (although not actually shown) that it may be unfavorably affected by long-continued medication. A hazard may possibly exist if there is a history of hepatitis.

The fear of developing cancer through hormone treatments crops up from time to time, especially if there are irresponsible newspaper reports, for instance, of the results of someone's experiments with mice and rats to produce cancer artificially with estrogen. Such experiments admittedly have no bearing on the reactions of the human organism. Is the attempt to apply experiments with the cancer-susceptible mouse to the human area anything but ludicrous?" asked Dr. Robert A. Wilson, whose extensive work has thoroughly debunked the cancer fear of women receiving estrogen during their change of life.

In my own clinical material of 152 male transsexuals, 141 of whom were treated with medium to fairly large doses of estrogen, some over several years, no incident of breast or any other cancer was observed. One may argue that these are mostly young men, less apt to develop a malignancy. The experiences of urologists, however, who treated elderly and old men with even much larger doses of estrogen for cancer of the prostate, must then be recalled. With the exception of one disputed case of breast cancer (it may have been a metastasis of the prostatic cancer) reported in the medical literature, no such

incident was observed in hundreds if not thousands of cases. In a personal communication from Dr. Elmer Belt, one of the outstanding and most experienced urologists in the country, he said:

In regard to the taking of Stilbestrol as a cause for cancer of the breast, we have placed several hundred men on this material (I imagine if we were to search our records we would find the number to be in excess of two thousand) and in all of these cases we have not seen a single occurrence of cancer of the breast, although the dosages we used were of a very high level.

Estrogenic Preparations

Parenteral use
As to the particular estrogenic preparations and dosages to be employed in transsexualism, a good deal of experimentation was and will still be necessary. There are so far very few leads in the medical literature.

In my own practice, Squibb's Delestrogen for intramuscular injections was employed with much satisfaction and positive results. This is a slowly absorbing, well-tolerated, potent preparation (chemically, Estradiol Valerate), and was applied in doses of 20 to 60 mg. (½ to 1½ cc.). Usually 30 to 60 mg. of Delalutin (Squibb) was added, an equally potent progesterone. This combination was given once a week or once in two to three weeks, according to the response as measured by the patient's emotional balance and physical feminization symptoms. Generally I found that dosage seems less important than length and regularity of administration.

Another preparation of even higher potency is Squibb's Delestrec, which at this writing is not yet on the market in the United States, but is well known in Germany and other European countries under the name of Progynon Depot (Schering). It is chemically Estradiol Undecylate in oil, likewise slowly absorbing, and containing 100 mg. to 1 cc. Injections of 1 cc. once or twice a month can be sufficient. Occasionally, however, larger doses are required to influence the patient's emotional distress.

These estrogenic preparations are solutions in oil. There are also suspensions of tiny estrogenic crystals in water (aqueous) available for intramuscular injections. They are of much lesser potency and would have to be given more frequently (twice weekly or more) over many months to produce sufficiently feminizing results.

In general, injections, as compared to oral medications, are justified for more easily measurable dosage, and usually prompter effects, but also for the fact that some psychological guidance or even brief psychotherapy can take place during the patient's visits, not to speak of the important physical checkups. Selfmedication by patients is definitely to be discouraged.

Oral use

Of the oral preparations, there is a considerable choice. They can be employed together with injections or in their stead.

Diethyl Stilbestrol is the cheapest, but has the most frequent side effects in the form of nausea and gastrointestinal upsets. Better borne and rarely causing nausea is ethinyl estradiol in the form of Schering's Estinyl. The largest dose of 0.5 mg. daily or three times a week is usually necessary to accomplish positive results. Occasionally a patient may not tolerate Estinyl and then Premarin (Ayerst) or Amnestrogen (Squibb) in doses of at least 5 mg. daily could be employed. These are excellent preparations of so-called natural female hormones, of somewhat lesser potency but often useful and sufficient, especially in patients operated upon and castrated, to prevent castration symptoms, and to further their feminization.

Potency and dosage of the estrogen preparation is not always the deciding factor in this type of hormone therapy. Many patients have the unfortunate tendency to believe that the more estrogen they take the more they will accomplish. They may actually do the opposite. Doses that are too large for a particular patient may not only constitute certain hazards for the liver but, by suppressing the pituitary gland function with its growth hormone, may actually accomplish less, for instance, in breast development. Smaller doses may do more; the regularity and length of treatment has appeared to me more important than the dose. The optimal dose will have to be determined for each patient individually.

The latest female hormone preparation that has been used in cases of transsexualism is Enovid (Searle), the well-known birthcontrol pill, containing both estrogen and progesterone. Promising results have been observed, but more extensive observations by a number of different clinicians is advisable. Enovid in doses of 10 to 20 mg. daily has served me well in the endocrine management, articularly of those transsexual males who were underweight. An increase in appetite and weight was almost regularly observed. The repressing influence on libido and sex functions seemed to me less pronounced than that of

estrogen alone. Therefore combinations of Enovid with Estinyl or Premarin occasionally gave the best results.

Finally, in addition to the parenteral and oral routes of administering estrogen, the topical (local) use must be mentioned. A cream that can be easily absorbed and that contains a sufficient dose of estrogen and progesterone can aid the development of breast tissue. Goldzieher and others proved conclusively that estrogen is absorbable through the skin and can aid the mammary development of hypogonadal young girls. The same is true in transsexual men although only as contributing treatment.

A twenty-six-year-old male transsexual had used rather liberally a commercially available hormone cream on his breasts without any other treatment. There was only a modest response (if any) of the breast tissue, but when this patient came under my observation and a hormone assay was made of a twenty-four-hour urine specimen, the 17-ketosteroids were found to be normal but the estrogen contents very high (110), when the normal is considered to be from 0 to 30.

Some years ago, workers in a chemical factory that produced estrogenic preparations complained of developing gynecomastia, impotence, and other feminization symptoms. They had constantly, over a considerable period of time, handled this estrogenic material without protection for their hands. The steady hormone absorption, through the skin, although in minimal doses, was found to be the cause. Such factory or laboratory work is now continued with glove protection of the exposed parts of the hands.

In presenting the above experiences, it is my wish merely to give the doctor some general lines of a possible therapeutic approach to this largely untrodden field of medicine. A better system of treatment may well be evolved, larger or smaller doses of estrogen may be found advisable, and more suitable combinations. It is my own conviction that "much does not help much" and that the general tendency should be to use the smallest possible doses that give sufficiently satisfactory results for a particular patient.

Finally, and to conclude the discussion of the nonsurgical therapy for transsexuals, it may be most interesting in future years to watch these patients who have received estrogen over a long period of time. Will they be less prone to develop coronary heart disease and other circulatory ailments that go with the process of aging? A well-known cardiologist, noted for his research in cholesterol metabolism, who had occasion to see a number of transsexuals under estrogen therapy, remarked jokingly, "These people will probably live forever."

Another question may be asked and possibly receive an answer in years to come. Will "chemical castration" with estrogen act similarly to surgical castration? Will estrogen-treated or operated transsexuals become bald as rarely as eunuchs do and less often than the average man? The sexologist as well as the endocrinologist of the future will undoubtedly find fascinating new avenues of study in the management of transsexualism.

Conversation Operation

Part I. Technique of the operation

In the majority of cases the operation consists of three principal steps: (1) Castration; (2) penis amputation; (3) plastic surgery to create an artificial vagina and external genitalia, which should resemble those of a female.

1. Castration. The technique is well known to every urologist. The question faced by some surgeons is, however, whether to remove the testicles or preserve them, yet make them invisible. A surgeon who prefers the preservation described his technique as follows:

The patient has first one and then the other inguinal ring opened. The testicle is isolated from the scrotal sac and is pressed upward through the inguinal ring into the abdomen. The inguinal canal is then closed as in a hernia operation. The testicle now lies like an undescended one outside the perineum, but inside the abdominal cavity. It is hidden from sight and touch. It loses its procreative, but retains its glandular function.

The reason why some surgeons may wish to retain the testes is chiefly endocrine, based on the theory that the testes in transsexual men may produce more estrogen than they do normally. The findings reported in Chapter 5 strengthen this view, although they have as yet found no confirmation.In any event, this reasoning supports the patient's intended feminization.

Another reason for a surgeon's wish to preserve the testes is because of a legal technicality. He cannot be accused of a (possibly illegal) castration operation.

In most conversion operations, I believe, the testes are discarded, that is to say, the patient is castrated. The consensus would probably be in favor of this procedure.

While most transsexuals themselves prefer to be castrated in order to remove more of their masculinity, an occasional patient wants to see the testicles retained with the strange, completely unfounded idea that they are necessary for a future climax during sex relations. It is astonishing how often the wrong information, superstition, and gossip circulate among transsexuals when they are those who should want correct information more than anyone else.

2. The removal of the penis is called penectomy or penotomy. The principal technical difficulty is the preservation of a functionally normal though greatly shortened urethra. I have seen poor results in this respect, the urethra requiring constantly repeated dilatations, or even corrective surgery. Unskilled surgeons have also left a penile stump, which resulted in later complications.

3. The plastic surgery is a challenge to the urologist, the gynecologist, and the plastic surgeon. It can be divided into two parts: the creation of female-looking external genitalia and of a functionally useful vagina.

Scrotal tissue is used to fashion the labia majora and, in the hands of a skillful surgeon, the appearance ultimately can indeed be deceiving. I know of a case when even a gynecologist was fooled. He had made a vaginal examination (undoubtedly superficial) and exclaimed: "I cannot find any uterus in this girl."

Occasionally the skin of the penis is utilized to form labia minora-like folds. All these tissues contain sensory nerve ends which later may help to convey sexual satisfaction, possibly climaxing in orgasm.

The creation of the artificial vagina is for many transsexual males (those with a primary sex motive for the conversion) the crucial part of the operation. Its success or failure may spell the success or failure of the entire sex change undertaking.

In years past the creation of the artificial vagina was performed as a separate stage of the conversion, that is, months or even years after the first stage, which was castration and penectomy. With greater perfection of the surgical technique, all this is now done in one operation.

For the vaginal plastic, a pouch, eight or more inches deep, is dissected in the perineum, close to but well above the rectum, so that a firm floor of the vagina may later exist, eliminating or minimizing the danger of a vaginal-rectal fistula. This pouch or channel passes behind the posterior aspect of the prostate. The incision extends upward from the apex of the perineal wound to the posterior surface of the seminal vesicles. The question then arises how to line this channel so that it can remain open and serve as a permanent vagina.

Three types of material have been and are still being used for that purpose. The oldest method is to use the skin from the thigh, buttocks, or back. Such skin is soft and contains relatively few hairs but has no natural lubrication. It is cut in thin transplants with the help of a special instrument, the dermatome. The transplants are placed around a rubber form, about two inches in diameter. The skin sections are then inserted into the pouch and are stitched to the skin of the perineum to prevent slipping. If all goes well, the skin segments will heal in and, with the help of artificial lubrication, the patient will then have a functioning vagina. The most striking studies in the physiology of the vaginal function and vaginal lubrication were made by W. H. Masters and V. E. Johnson. Those particularly interested in this special field would do well to peruse the pertinent articles by these two scientists.

Dilatation, however, first with one or two fingers, then with an instrument, a test tube or a plastic mold, is essential. Some patients have to wear a mold for several months. If they do not or if they do not dilate regularly, the vagina is likely to contract more and more and eventually close up entirely. A new operation would then be required. Only if the wall between vagina and rectum is thin, the wearing of a mold would be inadvisable as the constant pressure could produce a fistula.

In recent years a rather ingenious and, from what I have seen, so far the most successful method, has been perfected and is exelusively used by Dr. George Burou, a French surgeon in Morocco. Instead of using skin from the body to line the vaginal canal, the skin is stripped from the amputated penis and is inverted like the finger of a glove. This tubelike organ is then inserted into the previously prepared canal and utilized to form the inside of the tunnel that is destined to be a vagina. Penile skin offers advantages over skin from other areas because it has no hair at all and has nerve endings which cause it to bear the closest resemblance to that of a sexual organ. The two wound surfaces usually heal together without difficulty but dilatation is required the same as previously described. An uncircumcised penis is better because more skin is available, thus permitting the vagina to be made deeper. In any event, the outside skin of the penis, later on, represents the inner wall of the vagina.

Complications in the form of contractions through scar formations, occasional granulations (keloids), and insufficient depth of the vagina can occur after either method. They may necessitate additional minor surgery. Major surgery would be required only if the vagina has become obliterated and useless for normal sex relations.

As a third technique a more complicated procedure has been devised that is rarely, employed for the first attempt to form a vagina. It is probably more often the logical method when others have failed.

This third method utilizes a part of the gut, a loop of ileum, to serve as a vagina. The operation is a more formidable one as it requires not only the opening of the abdominal cavity but also a more intricate technique to insure the proper blood supply for the implant. The advantage is that a mucous membrane (with natural lubrication) and not skin forms the vaginal wall and that this wall may be less likely to contract.

In one patient undergoing a fourth attempt of vaginal plastic after others had proved unsuccessful, the method seems to have worked well. I have only the patient's written report; there was no personal inspection, nor an examination by a gynecologist.

One other patient had his initial operation recently performed with an ileal loop implant. The early outcome was unfortunate. The new and hopeful young "girl" suffered intensely for weeks afterward with abdominal pain and discharge from a vagina that had much too narrow an entrance to serve its intended purpose. It was found that an abdominal abscess had formed and a new operation was required for its removal. At the same time the entrance to the vagina was widened.

It is evident to me, a nonsurgeon, that the ultimate techniques for a successful conversion operation for male transsexuals are yet to be perfected. Perhaps there has so far been too little opportunity for surgeons to acquire the skill that future experience may bring. One handicap to be considered is that lack of complete success may discourage continued acceptance of these patients for surgery. The highly sensitive nature of most transsexuals, their precarious emotional stability, and the uncertainty of counting on their cooperation would more fully explain the hesitancy of doctors to venture into this - for many - controversial field.

An added difficulty for American patients is the fact that they have to leave the country to seek this particular surgical help abroad. Being anxious to get home as soon as possible, they deprive the surgeon of sufficient time for observation and themselves of the important follow-up care.

Whenever, in the future, a conversion operation will be recognized as legitimate surgery, perhaps even as a specialty within a specialty, and then become respectable therapy, improved techniques are bound to follow and with the improvement, perhaps more regularly obtained good results.

Blessed and burdened with their ability to choose, transsexuals may then face a future that holds fewer risks and greater rewards.

Part II. Nature of the operation

Such a major and irrevocable procedure as the surgical alteration of the male genital organs cannot be undertaken lightly. The indication for the operation must therefore be made strictly and with the greatest caution. The patient's request for surgery may be most impressively presented to the doctor; yet, before consenting to it, the doctor has to be certain he is not dealing with a passing erotic mood of an immature personality, but with a deep and honest conviction gained after long and mature consideration.

A psychiatric evaluation should precede all such operations to establish not only the possible existence of a psychosis (which may or may not be a contraindication for surgery), but also a reasonable degree of intelligence and emotional stability. Furthermore, it must be the psychiatrist's opinion that there is no other way to help this particular TS patient to a happier future.

Repeatedly, I have received reports from psychiatrists stating these facts. Here are some abstracts of psychiatric reports that I have received, or that came to my attention.

A professor of psychiatry at a large university wrote to the surgeon to whom he referred the patient:

In addition, as a result of this extensive psychiatric evaluation, I do not feel that any form of psychiatric treatment could make her either more masculine or content with a masculine role. Such treatment would be doomed to failure.

In the course of this evaluation, no evidence of serious mental illness has been found. The patient is not psychotic, and I do not believe she ever will be. Her character structure is essentially that of a woman, and she has adjusted very well to the feminine role. A complete battery of psychological tests has confirmed the impressions I have noted above.

Another prominent psychiatrist with much experience in the field of transsexualism had this to say in referring a patient to a surgeon:

I can find no areas in this young man's personality that suggest any pathological anxiety. His whole emotional defensive symptom is definitely stable and I do not anticipate any emotional difficulty whatsoever.

I heartily endorse this young man's wish for the operation, and from a psychiatric point of view, I do recommend it.

Again, another psychiatrist expressed his opinion in these words:

There is no evidence of any gross psychotic process, and whatever course of action takes place in this next year, it is unlikely that he will become psychotic. On the basis of his superior intelligence he is able to make his own decision. I consider that any attempts at psychotherapy would be fruitless and that his character structure would be inaccessible to any change through any psychotherapeutic process available today.

Unfortunately, not all transsexual patients submit to psychiatric evaluation or wait for anyone's consent, but through friends and acquaintances find their own surgeon, usually abroad.

In order to have all transsexual patients realize what they are doing when they undergo a major, transforming operation, I wrote an "Advice" for them that Sexology Magazine published first and which was reprinted in several other publications likely to be read by transsexuals. The magazine's identification of one is included in Footnote 4, together with that of the writer.

An interesting coincidence occurred in this connection. A reader of Sexology Magazine had written to the editor the following letter, which is rather typical and which I could duplicate many times from my files:

Dear Doctor:

What can I do to end my misery? In body I am looked at by others as a male, but in my mind and heart I see myself as a woman.

Life has played a dirty trick on me, forcing me to live with the outer appearance of a man, but the inner feelings and emotions of a woman. Although my sex is male, I really think I am very much on the feminine side. Except that I do not have breasts, I have a womanly figure. On occasion, while dressed as a female (something I feel compelled to do quite frequently to ease my emotional tension) I have been told that I am quite beautiful. People look at me with respect and admiration. Not so when I am dressed as a man.

Perhaps I could live always dressed in a woman's clothes; but then I would always live in fear of being recognized and arrested. That will not help. Even now, I feel that I am a true woman hiding in the false physical shell of a male.

I understand that some people like me have been able, after years of torment, to find relief and happiness by actually becoming female through treatments and an operation. I am convinced that this is what I really need to end my misery.

I want to change my sex. Can you help me? - F.T.S.

Just at the moment this letter was received, my "Advice" was submitted for publication. The editor promptly and logically used it as answer to the above correspondent; it is reprinted here for the particular benefit of all those who contemplate the operation or play with the idea:

Medical science and modern surgery have indeed helped cases like yours, although not too many and not always too well.

An operation to have your sex "changed" is probably foremost in your mind. Sometimes you may feel that such an operation is all you live for and that without it and without the change you can accomplish that way, life is not worth living. This is an understandable emotional reaction to your deep-seated urge to go through life as a woman.

You must realize, however, that emotion, especially if unusually intense, is not always rational and may well conflict with sound reason. Therefore, you should make an effort to think over your problem as unemotionally as possible, and to do so more than once. Let me help you to do it by supplying a little more knowledge and common sense. It may prove useful for your entire future life.

First of all, sex is determined at the moment of conception and therefore never can be changed. The so-called "change" by surgery concerns only those organs that make you physically and legally a man (or a woman). A serious major operation or series of operations are required to change the external appearance from male to female.

The difficulties of finding a competent surgeon are great. Few hospitals at the present time will allow such operations. Complications may arise afterward, more operations may become necessary, and the outcome is never certain. The artificial vagina that can be created by plastic surgery may or may not function to your later satisfaction in marital relations. I am speaking from experience with more than a single patient.

Furthermore, the operation, even if successful, does not change you into a woman. Your inborn (genetic) sex will remain male.

You must be aware of this fact, although it may have no practical meaning for your later life as a woman. If the surgeon castrates you as part of the operation, you would be, technically and from the glandular point of view, neither male nor female. You would be a "neuter."

Only your psychological sex is female. (Otherwise you would not have wanted the operation in the first place.) If the surgeon merely places your testicles in the abdomen to make them invisible, you would have to be considered a male, from a glandular viewpoint as well as legally.

Yet, it is true, you could look like a woman in the genital region and function as one after the operation. Even a climax (orgasm) during sex relations has been reported by most such patients. But remember, a time may come when sex is no longer important. Would you still want to be a woman then? Furthermore, constant glandular treatment with hormone injections or tablets - off and on - probably would be necessary for the rest of your life.

Is your general appearance and physical build such that you can pass as a woman, or is it possible you will look more like a man dressed up as a woman?

Don't ask the mirror. Take the word of an objective outsider.

Masculine features, a heavy bone structure, a height above the average, a prominent "Adam's apple," a heavy beard could be handicaps because they would be difficult or impossible to change.

The law too may cause you many difficulties and complications, even after the operation. Much red tape stands in the way for you to have your birth certificate read "female" instead of "male." But you may need that for a new job, or if you should want to get married as a woman.

And then, please remember that you are not alone in this world. You undoubtedly have relatives, parents, brothers and sisters. You must ask yourself how they would feel, having a daughter instead of a son, a sister instead of a brother. Their attitude and their happiness deserve your consideration before you undertake such an irrevocable step as a "conversion operation." You can only hope that they will put your happiness before their own preferences.

Religious convictions may trouble your conscience. Find peace and clarity before you decide on something that cannot be undone.

Even if all obstacles (including the important financial one) have been overcome and the operation has become possible for you, you should remind yourself once more that when you awake from the anesthesia, you are not a woman by any means.

When you have recovered from the pain and the aftereffects of the operation, after a few weeks or months, your real work begins - to change into a "woman." You have to learn how to behave like a woman, how to walk, how to use your hands, how to talk, how to apply make-up, and how to dress. Existing handicaps would require special attention.

Of course, you may have had your experience with dressing, etc., for some time already, but it was then more or less a game. Now it would be so much more serious because it is permanent. Also, your beard and body hair may require long and costly electrolysis to be removed.

Finally, but highly important, how do you know you can make a living as a woman? Have you ever worked as a woman before? I assume that so far, you have only held a man's job and have drawn a man's salary. Now, you may have to learn something entirely new. Could you do that? Could you get along with smaller earnings?

Again, I ask you to think over all these problems carefully, sensibly, and unemotionally. If you could try, perhaps with the help of a psychologist, to adjust yourself to your present male status, making the best of it in whatever form or manner, you may certainly save yourself immense complications in your future life and probably many sacrifices too.

If you can, discuss the problem with someone who is understanding but who does not have the handicap of emotional involvement. If everything seems favorable, a doctor - preferably an experienced psychiatrist - should still be asked to approve of the step you want to take. If he agrees with you and recommends the operation, then I would say "by all means, go ahead and the best of luck."

The above advice was written with the male transsexual in mind who desires to become a woman. But there are also female transsexuals who want to become men and live and work as such. They are rarer, but their emotional problems are the

same. My explanations and warnings, in principle, apply equally to them.

The operations they are seeking with the same emotional intensity naturally are different. They want a reduction in the size of their breasts, in order to appear masculine, the removal of the womb, and the ovaries, so that there is no menstrual period to fear anymore, and sometimes the closing up of the vagina.

More complicated plastic operations on the genitalia are very rarely requested. For instance, the construction of a penis that could be of use would require a series of complicated operations, costly through long hospitalization, and highly uncertain as to results.

Glandular treatment with hormones and psychological guidance are as important for females as for males, but naturally hormones produce no permanent changes. These can only be accomplished through surgery, which in turn requires as much mature and unemotional consideration as the parallel procedures in men.

Most important for my own satisfaction and consent to the operation was the belief that a reasonably successful "woman" could result and, naturally, that there appeared to be no other way to help this patient through any form of conservative treatment to a happier and mentally healthier future.

For a "successful woman," I had in mind particularly the outward appearance and the impression of the total personality.

A heavy masculine build, a height of six feet or more, and a strong, dark beard were causes for worry and doubt. But even with these handicaps, the operation was performed in several instances, with or without my consent. So far, all seems to have gone well with them. One patient who is now, several years after the operation, a decidedly masculine-looking "woman," with tattoos all over her body, is getting along well in an active business and is unrecognized as a former male. She is merely considered eccentric by her associates.

Under no circumstances, she assured me repeatedly, would she ever go back to living as a man. "This way I am at least myself and can relax," were her own words.

A couple of times she was arrested under the suspicion of "impersonating." When she was taken to a police station, examined and declared to be a woman, the arresting officers apologized and in

one instance, bought her a dinner. Not all patients in such situations fared equally well, as will be seen in Chapter 9 on "Legal Aspects."

A reasonably good emotional stability likewise played a part in my prognostic considerations and also, quite prominently, the attitude of the family if there was one to be considered. If happiness for one individual has to be bought with unhappiness for several others, it is not an ideal situation.

Finally, last but not least, I was concerned with the economic prospects of the future woman. Could "she" make a living and blend into society without friction and failure? I have seen difficulties in this respect and therefore preferred (without actually advising it) to have the patient live and work as a woman, although illegally in a technical sense, for a year or so before taking an irrevocable step. But such a trial period was not always possible.

It is understood that general health considerations, physical and mental, likewise could influence the indication for a conversion.

A period of six months or longer of observation is rather imperative before the operation is undertaken, best under estrogen therapy, in order to reduce the emotional intensity. Hamburger and his associates made the same suggestions and I found such an observation period invaluable to learn more about the patient's problem personality

Contraindications

Contraindications are self-revealing when evaluating the indications but further objections are raised against the operation which deserve consideration. These objections can be psychiatric, psychological, philosophical, medical, moral, or plainly emotional. An active psychotic state may certainly give pause and may require at least a postponement of any surgical procedure. Psychotic reactions may or may not be the result of long-continued and often intense frustration. They may not respond sufficiently to estrogen and other conservative treatments. It is therefore always possible that psychotic symptoms or a condition actually appearing to be a psychosis (for instance, a "schizophrenic reaction") will improve after the operation.

Psychologists, and especially psychoanalysts, have emphasized that the basic conflict of the transsexual is fear of the opposite sex, which cannot be resolved by any operation. Under analytic probing, such a fear may indeed be found to persist after surgery without, however, disturbing the patient's life. Some further feminization wishes and fantasies may occupy the minds of these patients after the operation but they are not always verbalized and a realistic outlook usually gains the upper hand, especially with the help of some psychological

guidance. Cosmetic procedures (breasts, nose, chin, Adam's apple, facial skin), have occasionally followed the conversion. They could be interpreted as motivated by further "feminization cravings."

A rather extreme but actually published objection to the operation by a psychoanalyst was expressed in this hypothetical question to a hypothetical doctor:

"If a patient came to you and wanted you to remove his normal eft eye or his right hand, would you do that, just because he asked you to?"

The illogic of this comparison is evident to an objective oberver. First of all, a patient who comes in with such a request is, on the face of it, acutely psychotic. Transsexuals as such are not psychotic unless one wishes to interpret the gender disharmony as a "partial" or "localized" psychosis, hardly an acceptable diagnosis. Furthermore, the transsexual does not want a useful organ (such as a normal eye or hand) removed, and thereby reduce his efficiency; but he wants a more or less (to him) useless sexual equipment altered so that a more or less useful (to her) equipment will result. Could thoughtless comparisons like this one be due to an unconscious antagonism on the part of the doctor? Or could even a self-protecting mechanism be at work?

There are of course many more psychoanalytic arguments against a conversion operation, especially having to do with the "castration complex," but this would not be the proper place (nor the proper author) to enlarge upon them.

Philosophical objections are probably based to a large extent on the violation of a tabu, that of interfering with the sacredness of man's physical sex. The gravity of this tabu has become more evident only since sex changes have been requested and undertaken in recent years.

The religious objections cannot be analyzed in a predominantly medical and secular text. For the devout, their beliefs are paramount. As such, they defy all argumentation. Objections, even from the side of the doctors, are sometimes made so passionately that they betray the high emotional potential that accompanies the violation of a tabu as well as that of cherished prejudices. (See page 62, Chapter 4)

Medically, or rather endocrinologically, we are reminded that no "female" can ever result from the operation but merely a castrated (or mutilated) male, with artificially created sex organs resembling those of a female and, if successfully created, allowing normal peno-vaginal sex relations. These comments and explanations are naturally correct.

Patients are always made aware of them but I have yet to find a transsexual who would be deterred from his goal by these considerations. Their identification with the female is evidently so complete and their psychological (female) gender-feeling so deeply ingrained (imprinted?) that the morphological sex has to yield.

Other emotional objections, based on the general antisexual culture in which we live, cannot be analyzed here in any detail. Sentiment mixes with sentimentality. Particularly the often violent protests by women may have their roots in an idea of personal loss, or the psychoanalytic theory of "penis envy" may be at work unconsciously. Its mere mention may suffice here.

There are, of course, legal implications too, which will be considered in a later chapter.

Four Motives for the Conversion Operation

My clinical impression of the more specific reasons why transsexual men want conversion surgery caused me to identify four principal, fundamental motives within the general picture of sex and gender disorientation.

The first, foremost, and most frequent is the sexual motive. It concerns particularly the younger transsexuals. Their sex drive is not that of a homosexual man but that of a woman who is strongly attracted to normal heterosexual men. In love-making, their male sex organs are in the way and must be altered so that the lover can be accommodated in as normal a manner as possible. A wellfunctioning vagina is therefore indispensable. Marriage with the adoption of children is the goal for most. But not infrequently, promiscuity, prostitutional or nonprostitutional, appears tempting for a period of time. "Let me try out my new toy for a while," one very attractive young "convert" pleaded with me when I pointed out to her the disadvantages and risks of promiscuity and prostitution.

The second motive, always present, but often overshadowed by the sexual, is the gender motive. Especially for the older transsexuals, the urgent need to relieve their gender unhappiness can be powerful and impressive. "Would you want the operation," I frequently asked, "if there could never be a chance for any sex relations with a normal man?" Some hesitated to answer, then said they would have to think it over. Those were the younger ones in whom the sex motive predominated. But others replied unhesitatingly, "Yes." They admitted they might lose something of their future happiness, but the gain would still be much greater than the loss. "I will feel free for the first time in my life," said one forty-year-old, referring to her "imprisonment" in a male body.

The third motive is even more universal. It is the legal motive. The constant fear of discovery, arrest, and prosecution when "dressing" or living as women is a nightmare for many. They want to be women legitimately and have a legal change of their sex status. Alas, red tape, if not personal antagonism of some bureaucrats, is their powerful enemy. The impossibility (in the great majority of cases) of changing name and status (on the birth certificate) while male genitalia are still present, is a strong incentive for surgery. The legal change is somewhat easier afterward, but by no means easy. Red tape is a rather enduring adversary, especially in some states of the Union. (See Chapter 9.)

The fourth motive is a social one and applies only if the transsexual patient happens to have a conspicuous feminine physique, appearance, and manners. It may constantly embarrass him through snickering, pointed remarks, and knowing looks. It has even endangered some of them through physical attacks by moronic, would-be "he-men," sometimes undoubtedly latent homosexuals who were "protesting too much." The appearance of the very feminine-looking young man could also be a serious handicap in procuring a job.

"I hated to go out with my son," a mother once remarked to me. "He embarrassed me no end by his looks. Now he made the change and lives and works as a girl (waiting and hoping for the operation). Now I am proud of my new and attractive 'daughter.' A former nasty remark from someone is now - if anything a wolf whistle. I love to be seen with her."

From personal observation, I could certainly verify the attractiveness of this otherwise completely inconspicuous "young lady."

In many patients, all four motives, especially the first three, play a part, merging and overlapping according to individual traits and circumstances.

Procuring the Operation

It seems almost unbelievable that in the United States, with all its resources and abundance of surgical talent, the operation is not available for a TS patient, at least not legitimately, in spite of valid indication and psychiatric recommendation. He has to leave the country and go to Europe, Africa, or Asia to find surgical help.

Nevertheless, a breakthrough in attitude, although not in performance, occurred during the summer of 1964. Dr. J. B. de C. M. Saunders, the chancellor of the University of California in San Francisco, issued a rather startling, courageous statement in response to inquiries from the press, relative to sex change operations.

While largely describing the corrective surgery in hermaphroditic conditions, he also spoke of transsexualism where

> . . . the normal, firm establishment of gender role has failed to occur. Psychiatric treatment rarely if ever has helped transsexual patients to accept a male role in life. A small number of male transsexual patients are knows to have been provided with treatment, facilitating their lives as women - the techniques involved are similar to those used in correcting physical anomalies of sex, hormone therapy and extensive surgical alterations, together with continuing psychiatric support. Although favorable results have been obtained in terms of mental health and social adequacy, these measures are undertaken with reluctance in transsexual patients. They have been advocated only as a course to be embarked upon when there is no other means of salvaging the patient. . . . Among such patients provided with endocrine, surgical, and psychiatric therapy in the United States, three have been treated at the San Francisco Medical Center, all within the past decade. In each instance, expert consultants concluded after prolonged study that no alternative course of treatment would suffice, and that the patient (already living as a female) could never adapt to a male role. . . . Such patients are extremely rare, and are not to be confused with homosexuals or the great majority of transvestites seen by psychiatrists. However, long-term study of the three patients treated here, and of those treated elsewhere, may provide a useful approach in the efforts of medical science to understand the many remaining questions about normal and abnormal sexual differentiation.

I have quoted at such length from this official document issued by one of the foremost universities in the country, because it is the first of its kind. While, to the best of my knowledge, no transsexual patients are being accepted by the Medical Center of the University of California for surgery, I feel the first step has been taken to help these patients and, at the same time, provide the opportunity for further studies. A change in attitude always has to precede a change in policy.

Another startling development along the line of progress occurred in Baltimore in January, 1965. According to newspaper reports (verified through personal information), a judge issued a court order to have a sex change operation performed on a seventeen-year-old transsexual boy, relieving a surgeon of responsibility. This followed the repeated delinquency of the boy (who stole wigs for personal use). An application by the parents and by the probation officer as well as the endorsement of an outstanding psychologist at Johns Hopkins University had brought the case to court.

Reports of isolated cases that were operated upon in Europe appear from time to time in the medical and lay press. Recently one came from Russia under the heading: "Sex Change in Moscow." "Soviet physicians have changed the sex of a twenty-seven-year-old male by surgery and hormone treatments. . . ." "The operation was reported in papers read at a recent Academy of Medical Sciences conference in Leningrad." The newspaper said a photograph of a mustachioed male taken before the operation was shown together with a postoperative picture of a smiling woman. The story said the man's mustache and beard disappeared after the operation and hormone treatment and the facial oval, skin, figure, eyes, and walk also changed.

It is not too difficult to visualize a possible future when extended scientific investigation might show that transsexual patients in the end - say after twenty years' observation - had not been materially benefited by the surgical alteration of their genitals. In such case, the operation would fall into disrepute and would be largely abandoned.

If, on the other hand, a prolonged observation period should reveal the patients operated upon to be - at least in the majority - happier and better adjusted persons in the role of the opposite sex, that is to say, in the case of men living reasonably normal lives as women, then the conversion operation would emerge from the medical doghouse and become "respectable" as an accepted procedure. Some surgeons may actually specialize in such surgery and develop techniques compared to which the present ones may appear crude. All observations so far (as will be shown in the following chapter) point to the likelihood of this latter eventuality.

Older surgeons and physicians in my own age bracket will readily remember the history of plastic surgery.

Fifty years ago, when I was a medical student in Germany, plastic surgery began to shape noses and perform face-lifting operations for cosmetic purposes. I remember a surgeon in Berlin who specialized in nose operations. His name was Joseph and he was referred to as the "Nasen Joseph" (Nose Joseph). He was bitterly criticized for what he did. Surgeons such as he were refused membership in medical societies and were branded as quacks by some of their particularly orthodox collegues. And then, sex was not even involved.

A sex change operation will naturally make emotions run much higher, not only on account of the aforementioned tabu but also because procreation is prevented. It is difficult to reconcile this argument with the only too well justified fear of overpopulation. The following chapter will provide a brief survey of my own observations during the past thirteen years with patients who have undergone a surgical alteration of their (male) sex organs.

They are only a relatively small number (51), not enough to allow final conclusions. More case histories over a longer period of time should be reported, especially by different observers. That may take time as there is still much hesitation on the part of the doctors and medical editors to publish data dealing with such a controversial subject.

Male Transsexuals and the Results of their Operations

Operative data

By the end of 1964, a total of 249 male transvestites were observed in my offices, either in New York or in San Francisco. Of these, 152 were diagnosed as transsexuals. This figure, however, may actually be higher as some transvestites do not reveal their true intentions during the first few interviews. In some others, an apparent transvestism may gradually seem to progress into transsexualism with or (more likely) without any treatment and patients originally diagnosed as transvestites (of the II or III type in the S.O.S.) are actually transsexuals (V or VI on the S.O.S.). A few of them are among the 51 cases operated upon.

These patients were, in the earlier years, mostly operated upon in Denmark, Holland, or Sweden, and a few in Mexico. Then, Dr. Elmer Belt in California performed a series of such operations. In approximately half of them I could observe the results. Dr. Belt discontinued this type of surgery a few years ago, largely for personal reasons. During the last three or four years, most conversion operations among patients I know were done in Casablanca, Marokko, by a French surgeon, Dr. Georges Burou. Reports have reached me of operations being done occasionally, rather secretly, in the United States, rather freely in Japan, occasionally in Mexico,and a few in Italy.

In the three northern European countries, the operations are still being performed but only on their own citizens, not on foreigners, because too great an influx of patients from other countries, especially the United States, is feared, patients who would want to take advantage of the more enlightened attitudes in matters of sex in Denmark, Holland, and Sweden.

The technique employed by the different surgeons undoubtedly varied from time to time and according to the patient, particularly concerning the formation of the vagina. In the majority of the 51 cases of operation in this country, the vaginal canal was lined with skin taken from the thigh, while in all those operated upon in Casablanca the inverted skin of the penis was utilized. In two patients that I know of,

a short piece of gut (ileal loop) was removed and used to form the vagina. This technique naturally constitutes a more extensive operation as it involves the opening of the abdominal cavity. In four of my 51 patients, the technique is unknown.

As far as pain and discomfort after the operation are concerned, the reports that I received varied greatly, probably in accordance with the constitutional pain threshold of the individual, his psychological state, the atmosphere in the hospital, the operative technique, and the way the surgeon and his staff acted.

From "It was rough," "I had dreadful pain, especially the first few days," to "It was really nothing," "I had very little discomfort," all kinds of descriptions were related to me. It seems that the most frequent complaint was about painful, early, and sometimes forcible dilatation of the newly created vagina with an instrument or with the surgeon's fingers.

The fees reported to me by patients ranged in the majority from $2,000 to $4,000, usually including a three- to four-week stay in the hospital. It was disheartening to some patients to be prepared to pay the reported fee of $2,ooo or even $3,000 to a particular surgeon, only to find out when they tried to make a definite appointment that the price had gone up $5oo to $1,ooo in only a few months' time. The surgeon, however, is said to have operated anyhow, allowing the patient credit for the balance of the fee.

Personal data

The ages of the 51 patients at the time of their operations were as follows:

23 in their	20's
14 in their	30's
11 in their	40's
3 in their	50's

The youngest patient was twenty years old. The oldest was fifty-eight. The average age was 33.02 years.

The social (educational) level of these patients was as follows:

Upper	6
Middle	37
Lower	8

At the time of their operation, the patients stated the following occupations:

Occupation	Number
Office work	10
Salesperson	3
Musician	1
Store proprietor	3
Hairdresser	6
Housewife	5
Stockbroker	1
Show business (acting)	10
Domestic	1
Office manager	1
Prostitute	3
Teaching	2
Practical nurse or companion	2
Photography	1
Retired	1
Unknown	1

Hypogonadism, that is to say, a more or less distinct sexual underdevelopment, existed in twenty patients (39.2 per cent).

There are nine only children among the 51. This amounts to approximately 17.6 per cent, which is higher than in the general population at a given time (Maximum 10%).

First evidence of transsexualism among these 51 patients was reported as follows (this would refer to the patient "feeling" like a girl, dressing in mother's or sister's clothing, etc.):

Early childhood	43
Puberty	2
Unknown	6

Evidence of childhood conditioning was as follows:

Positive conditioning	12
No evidence	28
Doubtful evidence	10
Early history unknown	1

In perhaps twenty-three patients, the sexual motive appeared to be dominant. The gender motive seemed to prevail in twenty-eight cases. A sharp separation is not possible. As explained previously, the legal motive exists in all cases and the social motive has to be thought of in only a minority.

Results of the conversion operation

In assessing the over-all results of the operation (to which estrogen treatment has to be added in practically all cases), several factors have to be considered: the physical and mental health, the emotional state, the social status, as compared to that before the change; the attitude of the family, the position in society, and last but by no means least, the sex life, largely dependent upon the adequacy of the newly created female genitalia, especially the vagina.

As to the period of postoperative observation, the longest period was thirteen years, the shortest period three months, with an average period of five to six years.

The descriptions of the results are based on personal interviews and examinations in forty-six cases. Otherwise, or supplementing the examinations, was correspondence, sometimes with the patient's doctor as well as with relatives or friends.

In describing the total result as good (including those that could be called excellent), satisfactory, doubtful, or unsatisfactory, conscious conservatism was attempted. In some cases, major or minor corrective surgery in the genitourinary region had already been performed when the estimation was made. In others, such operations may still have to be done and if successful, may then alter the estimation upward. The same could be said of later cosmetic procedures, especially breast surgery.

The impression of the total result was judged with the inclusion of the sex life, provided it played any part for this particular patient. This was not always the case. The results were:

Result	Number	Percentage
Good	17	33.3
Satisfactory	27	52.9
Doubtful	5	9.8
Unsatisfactory	1	1.9
Unknown	1	1.9

To be assessed good, the total life situation bad to be successful as well as the sex life. A good integration into the world of women with acceptance by society and by their families was essential.

Regarding the sex life, more will have to be said later. Here it should only be noted that an absence of an orgasm, if unimportant to the patient, did not necessarily exclude her from the good classification. If this defect, however, was sorely missed by the patient, the result was not considered good.

If the result was distinctly lacking in any of the above areas but otherwise fulfilled the patient's wishes, it was termed satisfactory.

Whenever I was uncertain whether to judge the result good or satisfactory, the latter designation was chosen.

Cases were considered doubtful whenever only insufficient or contradictory information was available, or whenever the genital status (appearance) and sex functions were unsatisfactory, yet the relief from gender unhappiness was present and the patient had no regrets.

Considered unsatisfactory was the case of a "woman" now sixty-four years old, of Latin extraction, operated upon in Europe in 1955 without my consent. She was the only one who expressed regret over the decision to be sex changed. The operation, incidentally, did not include the formation of a vagina. This patient, in his former male role, was reasonably prosperous, having always held a well-paying position in the business world. As a woman, he was never able to make a satisfactory living and was always in financial difficulties, although fully acceptable as a women in appearance and manner. She had insisted on conducting her own mail-order business in which she had no experience. Her command of the Spanish language was hoped to be a great asset. Alas, it did not prove to be so.

Her general health had also failed, perhaps owing to psychosomatic influences (lack of a sex life?) and a return to the male status is now being considered and most likely advisable.

In this case, the sex motive had probably played an equal part with the gender and legal motives when the operation was decided upon at the age of fifty-six. Emotional frustration, however, compounded by economic failure and the aging process, probably led to the present unsatisfactory state which, as may be hoped, can be improved under a new life pattern.

Here, the outcome of his venture into the female world was considered unsatisfactory by the patient himself. Such selfassessment, I feel, is

necessary to justify an unfavorable diagnosis. I found no other similar example among the 51 patients.

In one other instance too, the outcome could be considered "unsatisfactory," although this patient never actually said so or expressed the wish to return to male status. Here again was economic failure as a female and with it, failure in the social status, so that the present "woman" cannot be compared to the former man. In addition, there is no satisfactory sex life. Yet female dress and female occupation (factory work) were considered preferable to the previous well-paying male job (architect). Here a satisfied gender motive evidently acted as a compensatory factor.

Three of the 51 TSs operated upon unfortunately have died. One was successfully married as a woman for six years, a house wife and clubwoman, a charming, intelligent lady who succumbed to a fatal heart attack at the age of 50.

The second died a "narcotic death," according to the medical examiner's office (see page 68 in Chapter 4).

The third died in her 51st year. Her "sex change" dated back to 1954 when she was operated upon in Holland but without the formation of a vagina. This was first attempted later in the same year in the United States, but unsuccessfully. The vagina was reconstructed in the United States in 1958 but a vaginorectal fistula developed. It was repaired successfully the following year.

In the meantime, the patient had lived in reasonable comfort as a woman, held a clerical position with a large business concern for ten years, and was fully accepted as a woman. She enjoyed several "sex affairs" after the final operation on her vagina.

The patient died late in 1964 of a complication of illnesses requiring repeated operations. Several large liver cysts were removed. (There was a history of hepatitis in the late forties.) Part of a benign pancreatic tumor was excised. Later a "dormant" carcinoma of the pancreas was discovered. She was also operated upon for stomach ulcers, developed diabetes and hypertension, but the immediate cause of death was a pulmonary embolism.

An Example of Success

If an example was given above in some detail of an unsatisfactory outcome of the operation, at least one history should in fairness be related where a good (if not excellent) designation is justified.

Jonathan, usually called Johnny, was twenty-four years old when I saw him first. He was a miserable, unhappy young man of rather short stature, slightly overweight and moderately underdeveloped sexually, a transsexual of the VI type in the S.O.S. He worked in a restaurant as a checker. One of the headwaiters was homosexual and gave our patient a bad time with his unwanted propositions. While Johnny was attracted to men, he disliked homosexuals. "They want another man," he said, "but I feel I am a girl."

Finally Johnny had saved enough money, his family was understanding, and a psychiatrist to whom I had sent him definitely recommended surgery. One year later, he went to Europe (in 1955) and, in those earlier years, had only a castration and penectomy done. An American surgeon, two years later, fashioned a well-functioning vagina.

Then Johnny (now Joanna), met a man a few years older than he (now she) when she was working as a receptionist in a dentist's office. He was and still is a reasonably successful salesman. He fell in love with Joanna and married her. He knows only that Joanna as a child had to undergo an operation which prevented her from ever menstruating or having children. They have had a distinctly happy marriage now for seven years. Joanna no longer works but keeps house and they lead the lives of normal, middleclass people. To compare the Johnny I knew with Joanna of today is like comparing a dreary day of rain and mist with a beautiful spring morning or a funeral march with a victory song. The old life in the original (male) sex is all but forgotten and is actually unpleasant to be recalled.

This "John to Joanna" transformation is not unique. It could be duplicated perhaps a dozen times among my own patients, naturally with all kinds of variations.

Yet these successful outcomes should not deceive us as to the risks involved. While most transsexuals who underwent the operation were decidedly better off afterward than before, they did not become models of emotional stability and mental adequacy. A few do remain more or less disturbed, insecure, in precarious emotional balance, problem personalities who could perhaps be helped by psychiatric guidance. Alas, too few seek it and that may be another reason why some drift occasionally into reactive depressions or into promiscuity, prostitution, and addictions. The salvaging of transsexuals does not always end with the operation, though without it there would have been no hope.

Changes following the conversion

Physical Changes

The physical changes soon after the operation were few. It takes time for them to develop. They can generally be described as demasculinization, but actual feminization is probably due more to the continuing estrogen medication than to the surgery (see Chapter 6). If the technique included castration, it is conceivable that a reduction of androgen production aided the estrogen effect, unless one adheres to the theory that the testicles of transsexuals always produce a considerable amount of estrogen. As yet, this has not been proved, although one may suspect it at least in some cases from evidence so far inconclusive.

The regular loss of weight during hospitalization is soon recovered and a moderate gain in weight (owing to estrogen, especially Enovid medication?) soon takes place. Estrogen medication occasionally seems more effective, even with smaller doses, after the operation than before, which may be psychological, but could also be endocrine provided the testicles had been removed. Actual castration symptoms were rarely observed, undoubtedly on account of the continuing estrogen therapy.

The "female form"

Breast development, necessary for an emotional relief in all transsexuals, may respond a little better to estrogen after the operation (with castration), but, to repeat, I still feel that this particular response is more dependent upon constitutional, hereditary factors than to any particular form of therapy. Sometimes small doses are more effective than large and sometimes it is the other way around. Therefore, breast surgery, with implants of various types, is often chosen as a surer, quicker, although more risky way to acquire the All-American "May West-Jayne Mansfield" bosom. The sometimes exaggerated and unnatural results, the usual hard, marblelike structure, seems no deterrent and can please just the same.

In several cases, I saw infections develop that necessitated the removal of the implant. Silicone injections into the breast tissue, wich some plastic surgeons prefer, yielded a satisfactory result in one case and rather negative results in two or three others.

After a recent survey conducted in this country, the American Society of Plastic and Reconstructing Surgery came out against breast implants or similar devices used in women; thirteen out of twenty-three doctors had discontinued this technique after finding it unsatisfactory. "Stick to falsies," they said.

Mental changes
The mental changes were invariably more pronounced than any physical ones, as is to be expected. The great satisfaction that goes with a final accomplishment of a difficult and long-sought-for mission was strikingly evident. Occasionally, however, it was marred by an unsatisfactory genital (and sexual) state and the necessity of further corrective surgery.

"How do you feel now, after it is all over?" was my regular question. The answers ranged from "In seventh heaven," and "Oh, so wonderful," to the more cautious "Okay, I'm glad it's all over." My "Would you do it again?" was answered in the great majority of cases with an emphatic "Yes." A few were hesitant; two said: "I don't know" and one or two inclined toward "No," because there had been too much pain and discomfort and the result, because of sexual difficulties or frustrations, not sufficiently rewarding, at least at the moment (see also remarks on page 120 in this chapter).

Handicaps and disappointments
Invariably, disappointments had to do with the sexual functions. If the surgical result was satisfactory, the sex motive for the operation later on requires the proper sex partner in the form of a husband or lover. Even an attractive girl may find it difficult to meet her Prince Charming. If she feels that time may be running out, it could easily cause much feeling of insecurity, dissatisfaction and depression, in spite of the attainment of her life's ambition, and still leave her with unsolved problems.

The physical state of the vaginal canal is, however, paramount for all those whom the sex motive led to the conversion. To repeat: unless proper, skillful dilatation of the vagina is resorted to from the very beginning, the vagina may contract through scar formation, even years later, and eventually close up entirely. This would necessitate a new and major correction, possibly with the formation of a new canal, lined with skin from the thigh or even a loop of intestine.

Minor scar formation or insufficient depth or (rarely) a retention of a small penile stump can more easily be corrected. In three of four cases a widening of the urethral opening was necessary and in one case, unsightly and disturbing long scrotal folds had to be shortened to resemble the labia majora.

The immediate postoperative period is fraught with the possibility of complications. Constitutional factors, the surgeon's skill and experience, and scrupulous aftercare seem to be vital factors in avoiding disappointments and securing ultimate success.

In a smaller group of patients the gender motive outweighed the sexual. Thus the state of the genital region was of minor importance as was their entire sex life.

Orgasm
The inability to achieve orgasm was a handicap for only a few. Pleasurable sensation and satisfaction were repeatedly claimed even without an actual climax. However, definite orgasmic ability with a more or less distinct ejaculation from the urethra was described by more than half of these 51 patients, although the orgasm did not take place on every occasion (which is the case in normal relationships too).

The explanation for the orgasm without a clitoris and a natural vagina is probably twofold. First, the psychological effect of, at last, being able to take the longed-for female role in the sex act. Second, the possible retention of sensory nerve ends in the scrotal (now labial) fold and also in the penal (now vaginal) tissue, provided this particular surgical technique was used. Occasionally it took several months, and of course the right partner, before the first orgasm was achieved. But even without it, they were satisfied with their ability to be a normal sex partner (in a face-to face position) to their husband or lover. Ejaculation even with orgasm does not persist for long.

It usually disappears, in all probability, with the gradual atrophy mainly of the prostate gland.

Corrective surgery
Among the 51 cases, major corrective surgery was required in eight instances, minor in seven. The major consisted of the formation of a new vagina with a lining different from the one originally used. Minor ones were usually the removal of scar tissue and surgical dilatation of the vagina or urethra with prescription for molds or dilating objects for the former.

Additional surgical corrections were required in twelve of those (among the 51) whose vagina was lined with body skin. It was necessary in three who were operated upon with the use of penile skin.

The male transsexual's life after conversion

Postoperatively, it is a great delight right away for the true TS to view his (now her) own genitals in the mirror, thus having visual proof of femininity. To show the female genitals to doctors or intimate friends likewise gives great satisfaction.

My secretary told me she once entered the waiting room unexpectedly and saw a newly operated upon TS with uplifted skirt, proudly and

quite unconcernedly exhibiting her "female" genitals to two other TS patients. But aside from the appearance, the attainment of a sex life as a woman is the most essential part of the future life, with marriage and the possible adoption of children as the dearest wish.

The sex life is less essential or altogether immaterial if the gender motive was the driving force for the operation.

Of these 51 patients, twelve married as women. Also, twelve were married previously as men. Five have experienced married life from both sex angles (as a male, unsuccessful, some not even consummated); five were divorced as females and three remarried one or more times.

Of the 39 unmarried, twenty-three reported sex relations. Of these, nine are part or full-time prostitutes, at least at this time of writing.

The unfortunate fact that a number of patients went into prostitutional activities right after their operations has turned some doctors against its acceptance as a legitimate therapy.

As one urologist expressed it: "I don't want a respectable doctor's clinic to be turned into a whorehouse."

Behind this exaggeration is not necessarily a puritanical mentality alone. It may have very practical reasons (loss of other patients?) or spring from the idea that a doctor is not only there to protect or restore his patient's health but also his morals.

A physician with such a concept may enjoy the feeling of being on the side of the angels but he scarcely has ethics or logic for support. Should a physician refuse to heal the injured right hand of a pickpocket because he may return to his profession and perhaps forge checks besides? Should a urologist - for argument's sake - decline to treat sexual impotence because a cure may induce the patient to start an illicit love affair or, if married, lead him to adultery?

A doctor could hardly be held responsible, and should not hold himself responsible, for what a patient will do with his regained health. That is none of his business. Such an attitude could lead to endless absurdities as the above examples show.

The medical literature on the conversion operation

Scientific reports as to the result of the operation are so far meager indeed but will most likely increase in the near future. Several reports in the past dealt with only one case, successful or unsuccessful. In

1961, an article appeared in Acta Psychiatrica Scandinavica written by John Hertz, Karl-Gunnar Tillinger, and Axel Westman, dealing with five cases. Here is their summary:

The authors give a report on five cases of Transvestitism, two males and three females. After a thorough examination, including endocrinological and psychiatric exploration, they were all treated hormonally and surgically. In the males a surgical demasculinization, i.e., extirpation of the penis and scrotum with its contents, was followed by administration of oestrogens while in the females a defeminizing procedure, i.e., extirpation of the ovaries, tubes, and uterus as well as extirpation of the breasts, was followed by treatment with androgens. Postoperative follow-ups for 3½ to 16 years revealed that the final outcome in three of the cases could be characterized as satisfactory and in one case as definitely good. In the fifth case the outcome was satisfactory until an unsuccessful attempt to form an artifical vagina induced rather deep depression.

Dr. Leo Wollman, noted gynecologist and student of hypnotism, who had occasion to examine and treat a considerable number of transsexuals after their operation, has this to say:

"Before irrevocable surgery makes the transition from male to female physically permanent, it is essential that a psychiatric evaluation and a psychological examination be done. This is indicated for the protection of the physician as well as the patient. Also a period of observation under estrogen therapy to reduce libido and tension is recommended.

It is suggested, as an avant garde technique, that hypnotic progression might be an important asset in the true evaluation of the transsexual's needs and aspirations. This projection into the future may, in some cases, dispel certain faulty attitudes and provide the faltering future female with second thoughts before definitive surgery.

Following the preparatory estrogen hormone therapy to provide breast tissue and decrease the male libidinous feelings, the transsexual embarks upon a new life immediately after the surgical removal of the external male sexual apparatus and the creation of a functional vaginal sheath. Many varying surgical procedures have been divised and are being carried out with equivocal results. However, in those cases where medicine and surgery have sucessfully created a phenotypic female, the "gynecological" problems of the male-to-female individual merit special attention.

For this patient, patient understanding and gentle treatment are necessary. The most frequent complaint after the operation, excluding the painful convalescence, is urinary frequency usually due to a

urethro-cystitis. Antibiotic treatment will effect a rapid surcease from the disquieting urinary signs and symptoms.

A rather unusual urinary complaint is the control of the direction of the urine stream flowing from the os urethrae. If the urethral opening remains high, the flow will run over the rim of the toilet seat. This messy condition may be prevented by adjusting the tilt of the pelvis to permit the urine to flow into the bowl.

Another common complaint is the inability of the transsexual (now a female) to consummate sexual intercourse. This may be due to many factors. Notable among these are 1) an atretic vagina, 2) a narrow introitus, 3) a thin vaginorectal septum, 4) an insufficiently lubricated vaginal canal, 5) vaginal bleeding from the apex of the freshly scarred vaginal pouch after vigorous coitus.

Treatment for these aforementioned dyspereunic states will vary with the condition found. Simple hygienic measures, proper lubrication methods, new coital techniques, dilatation by means of a Kelly aluminum dilator or a bakelite Young's dilator or a solid plastic mold worn with a flattened superior surface to protect the urethral passage, and sensible advice usually meted out to newly-weds are some of the physical and psycho-physiological treatments found effective.

Above all, it is imperative for the gynecologist to regard his patient as a "female" - as "she" so rightly deserves to be considered after the lengthy and costly efforts to become a physical female. A great deal of research is indicated by the medical and psychological investigators before more consistent help can be offered to these male transsexuals, now ostensibly functioning females. The Harry Benjamin Foundation is now actively engaged in a research program of this type."

In a lecture before the American Psychiatric Association, on May 6, 1964 in Los Angeles, Ira B. Pauly, psychiatrist at the University of Oregon, carefully reviewed the international literature on transsexualism. I am quoting from the summary in his manuscript:

The transsexual attempts to deny and reverse his biological sex and pass into and maintain the opposite gender role identification. Claims of organic or genetic etiology have not been substantiated. The evidence from cases of transsexualism appears to complement the information from studies of human pseudo-hermaphrodites and stresses the significance of early learning and conditioning in the determination of gender role preference.

The choice is made early and is difficult to reverse. Although psychosis is not frequent in the schizophrenic sense, in its most

extreme form, transsexualism can be interpreted as an unusual paranoid state, characterized by a well-circumscribed delusional system in which the individual attempts to deny the physical reality of his body. The term Paranoia Transsexualis has been suggested as an appropriate descriptive term for this syndrome. Psychosexual inversion is seen as a spectrum of disorders, from mild effeminacy to homosexuality, transvestism, and finally transsexualism, each representing a more extreme form, and often including the previous manifestation.

An attempt to approximate the female anatomical structure is the final step in this syndrome. At least 93 men and 22 women have obtained surgical intervention to some degree. Follow-up studies at the present time are inadequate to determine empirically the value of surgical treatment in this syndrome.

An understanding of this syndrome may prove helpful to further our knowledge of psychosexual development in general, and hopefully reversible problems of psychosexual identity in particular.

Per Anchersen writes as follows:

In treatises on these problems we find that the discussion has been characterized by strong emotional reactions and conventional points of view. Glaus (1952) mentions two male transvestites who were operated (castratio and ablatio penis) and who afterwards gained a feminine social position. He adds himself a third similar case.

In an extensive discussion in Psyche (1950), religious and ethical views were raised and disturbed the impression of more rational points of view (M. Boss, C. G. Jung, H. Kranz, and others). In Denmark Stürup and collaborators have maintained a sober humane point of view in order to manage to help these unhappy human beings to a better psycho-social adjustment.

Interpreting the result of a sex change operation is not as easy as that of a cataract or a gallbladder removal. Too many factors enter, psychological and physical, that may obscure the issue, and not the least, the observer's own attitude may color his reports. Much of it has been discussed in previous pages.

Furthermore, the statements of patients who may still have their neurotic tendencies have to be employed as yardsticks much more often than measurable physical changes. There are also patients who want to please the doctor with their statements. Pauly calls transsexuals "unreliable historians." Furthermore, the results observed

and reported by one investigator are not enough. They should be complemented and confirmed by others, working possibly in a different emotional atmosphere and with different medical criteria.

I have heard the operation condemned by a prominent internist who never saw a single case. He replaced knowledge with arrogance when uttering his prejudices. I have heard the results of the operation generally minimized by a surgeon and also by a psychiatrist who saw only those doubtful or temporarily unsatisfactory cases who came to them for further help. They did not see and therefore did not consider those who were well and satisfied and no longer in need of medical attention. It has been my endeavor to avoid these pitfalls.

Conclusions

My observations have forced upon me the conclusion that most patients operated upon, no matter how disturbed they still may be, are better off afterward than they were before: some subjectively, some objectively, some both ways. I have become convinced from what I have seen that a miserable, unhappy male transsexual can, with the help of surgery and endocrinology, attain a happier future as a woman. In this way, the individual as well as society can be served. The rejection of the operation and/or treatment as a matter of principle is therefore not justified.

Legal Aspects in Transvestism and Transsexualism

Criminality before the law is not necessarily criminality before science and common sense. Transvestism, transexualism, homosexual behavior, drug addiction, alcoholism, and prostitution are examples. They are problems of health, behavior, and character. They call for treatment and education instead of punishment. Their interpretation as "crimes" creates criminals artificially merely by definition. This holds true particularly of transvestism, which is as much an abnormality of behavior as it is a sexual deviation.

Please read this introduction once more

A contact between the law and the transvestite-transsexual phenomenon exists principally in three separate areas. (1) The male transvestite's desire to "dress" and appear in public in female attire. (2) The performance of the conversion operation, which primarily concerns the surgeon; and (3) the legal change of the sex status of an

operated upon or (more rarely) a nonoperated upon transsexual person who lives as a member of the opposite sex.

The transvestite's "dressing"

For all practical purposes, "dressing" concerns only the man who puts on female clothes. The female transvestite hardly ever gets into trouble with the law.

There is actually no law anywhere that expressly forbids a man to dress as a woman; but the New York State Code of Criminal Procedure, Section 887, Subdivision 7, is being used against transvestites, and other states have similar statutes. This law says that a person (designated as a "vagrant") must not appear with "a face painted, discolored, or covered or concealed or being otherwise disguised in a manner calculated to prevent his being identified." This applies to persons "on a road or public highway, or in a field, lot, wood or enclosure."

This law had been passed more than one hundred years ago for an entirely different purpose. It was directed against farmers who disguised themselves as Indians and sometimes attacked law officers when they tried to enforce an unpopular rent law.

Under this catch-all "vagrancy" statute, transvestites have been arrested repeatedly when recognized while venturing outside their homes and many have been convicted, fined, and jailed. Theoretically they also could be arrested in their homes for "dressing," because the law refers to an "enclosure." So far, however, that has not happened, to the best of my knowledge.

Three cases

A middle-aged man, an airline pilot for many years, of high standing in the community, a recent widower and a father, whom I knew well and for whom I have the highest regard, was arrested last year in the street near his home, wearing a wig, female clothing, and so on. This man had been a transvestite for many years with the full knowledge of his wife, who understood and protected him while she lived. Now he lived alone and indulged only rarely in his hobby.

Looking rather masculine, he knew he was taking a chance going out "dressed," but the urge at times was too irresistible. And so on this occasion he ventured out and near his home was recognized by a police officer who later appeared as the only witness against him at

the trial. There was no testimony that the defendant was engaged in any immoral or criminal activity beyond his being in female attire.

The defendant's attorney pointed out that Section 887-7 was unconstitutional as in violation of the "due process of law" provisions of the 14th Amendment of the Constitution. The Court ignored this as well as favorable testimony as to character and the like, ruled the defendent guilty and sentenced him to two days in the workhouse. Then the court suspended sentence. Maybe the judge felt that the letter of the law conflicted with plain common sense and in this way tried to help the defendant.

However, the damage was done. His employers learned of his conviction and he was suspended from all his duties. Amusingly, right after his arrest, one of his superiors in the airline phoned me to ask my opinion about the man's sanity. After I assured him that he was perfectly sound mentally, the superior asked me: "Would you let your wife fly with him?" (He had been a pilot for this airline for over twenty years). "Of course I would," I replied, "and I would fly with him myself with fullest confidence, his transvestism has nothing to do with his competence."

But this and other testimony did no good. The arrest and conviction could not be undone. The man lost his job. And this, a year before he would have been eligible for pension. This case was appealed but came to an end when the U.S. Supreme Court refused to review.

Another patient of mine had a different kind of experience. He was a transsexual, overanxious, as many are, to be operated upon without being fully ready yet to change to a believable woman. "She" could still be "read" (recognized) rather easily.

Back from abroad after the conversion operation, and no longer a male anatomically, she felt safe and confident in her new role as a female. Two detectives thought otherwise and arrested her for "impersonating." Her plea that she was a woman brought forth only an "Oh yeah! Let's see." She was taken to the police station and there examined by a matron who told the detectives that they had made a mistake. The suspect was a woman. But, contrary to the case previously described, when the arresting officer tried to make good his error with a dinner invitation, these two detectives thought of another way out of their predicament (false arrest). They changed the charge from "impersonating" to "soliciting." The girl had to stand trial as a suspected prostitute. A wise judge, however, recognized the charge for what it was and promptly dismissed the case.

How I tried to protect transvestites and especially the more vulnerable transsexuals from arrest by letting them carry a certificate of

explanation and the consequent failure of my effort is related in Chapter 4.

A strict and pedantic and somewhat automatic adherence to the letter of the law is often nothing but an exercise in the abolition of common sense. We can be consoled, however, by an occasional exception through the courageous act on the part of some highly placed official or judge. Here is an example:

E, a transvestite who for years had lived as a woman and whom I knew through frequent contacts to be a respected and responsible person, wanted to travel in Europe as a woman although the birth certificate and the given name were that of a man. I wrote the Passport Bureau, State Department, Washington, presenting fully all the facts in support of E's application for a passport to be issued in her female name and identity. Without comment, E's request was granted and she received the desired passport. Someone in the respective department was big enough to override technicalities and, in this instance, common sense won out over possible "rules and regulations."

If this official, he or she, should happen to read these lines, I want to salute this rare bit of courage and wisdom.

A remedy?

Incidents of arrests and convictions of transvestites for "impersonating," often with prison sentences, take place daily in this country. When acquittal or probation takes the place of imprisonment, it is not always due to clemency on the part of the court. It is sometimes because the defendant is such a feminine-looking individual (and perhaps possessing no male clothes) that no one knows whether he belongs in the male or the female section of the jail. To let him go is then the simplest way out of a predicament. But I know of incidents too when, with rather medieval brutality, "masculinization" with forcible haircuts and prison clothes fitted the TV or TS into the section for men, naturally exposing him to ridicule or sexual abuses by the inmates.

All this can be avoided and is being avoided, for instance, in Hamburg, Germany, where an enlightened administration found way to help transvestites and serve justicia at the same time. Based on a physician's certificate, the Hamburg police department issues a card to the transvestites, not giving them permission to "dress," but merely stating that this person is known to the department as a transvestite. That is all, but it is enough to absolve the particular person from any suspicion of "criminal intent" in "dressing" and therefore from arrest.

More than thirty years ago, I wrote to the then New York Police Commissioner, Edward P. Mulrooney, in the interest of a transvestite patient of mine, suggesting the method described above and at that time in use in Berlin. A polite but negative answer came, pointing out that the law would have to be changed.

Two German psychologists, in a recent article for a medical journal, suggested and certified by citing cases that wherever a greater permissiveness of society and the law allowed first-name changes and the wearing of female attire, the transvestite's peace of mind was promoted and thus his ability to work and maintain himself better economically and psychologically, to the benefit of the community. Incidentally, such a method could, in some cases, forestall the request for a conversion operation, as previously explained regarding the "legal motive" for the operation).

Here it may be appropriate to repeat the advice that Turnabout, a magazine for transvestites, gave in its fourth issue, Volme I, 1964: "How to Keep an Arrest from Becoming a Disaster."

DO ADMIT your male status, if you are questioned in a public place by an officer of the law.

DO CHECK the identification of the officer, especially if he happens to be a plainclothesman.

DO OFFER your male name and address only, if you are asked to do so by a bona fide policeman.

DO SHOW the officer your own legal masculine identification when it is requested from you.

DO FOLLOW the officer peacefully to the police station if he decides to take you there.

DO INSIST upon contacting an attorney or public defender as soon as you arrive at the station.

DO REQUEST postponement of your court appearance if your attorney is not in the courtroom.

DON'T ATTEMPT to flee or evade arrest if a police officer challenges you.

DON'T TRY to bargain with the arresting officer or with any other officer.

DON'T GIVE any statement whatever, whether it is a written one or an oral one.

DON'T ANSWER any questions with regard to the subject of homosexuality.

DON'T GIVE any information as to your job or the identity of your employer.

DON'T ADMIT or DENY the charge which the arresting officer places against you.

DON'T DISCUSS your case with another prisoner or anyone else before trial.

I sometimes wonder if the Chevalier d'Eon ever had trouble like that and needed such advice.

An ancient law threatens surgeons

Older than the law used against transvestites is the one that could be used to forbid the performance of a conversion operation. It is the so-called "mayhem statute" that goes back to the days of Henry VIII, and as the New York attorney R. V. Sherwin says, "has no connection with anything remotely related to the subject under discussion."

England had many wars in those years and soldiers too often tried to evade military service by mutilating themselves, or would have someone do it for them, by amputating fingers, toes, even a hand or a foot. The king therefore had a law enacted that forbade depriving a soldier of any part of his body necessary for his defense and making him less able to fight. To visualize the male genitalia in this category is difficult; yet this old English law, having with many others been embodied and still existing in our present American penal code, could be used to prosecute a surgeon - at least theoretically. I know of a surgeon who refused to operate after being warned by a district attorney. I too have received a letter from another district attorney's office with the same warning after I had asked for the respective information. While no case of an actual prosecution under this law has come to my attention, it has undoubtedly served to intimidate doctors who otherwise might have been willing to operate upon an occasional transssexual patient. Whether fear of actual legal complications, or fear of blackmail, or fear of being criticized predominated, is a matter

for conjecture. Eventually a Supreme Court decision may be required to ban the specter of the mayhem statute for surgeons and allow them to act in accordance with science and their own consciences.

Legal reforms notoriously take place at a snail-like pace. J.W. Ehrlich, famed San Francisco attorney, said in his recent book, Reasonable Doubt: "... if medicine had remained as backward as the law, the chief remedial aid of today's doctor would still be bloodletting."

But there is another point that should not be forgotten. Many of the objections against a sex conversion are rooted in religion, as are most sex laws and legislation of morals. One may ask whether such legislation is justified in a society in which church and state are supposed to be separated.

In "Sex vs. the Law, a Study in Hypocrisy," Harriet F. Pilpel, a noted New York attorney, has this to say about our sex laws: "They can only be enforced by snooping, informing, and entrapment. They make 'sins' into 'crimes', in short, they are completely at variance with the realities, and even with ethics, of our lives today."

The legal change of sex status

When the transsexual has been operated on or sometimes even before any operation, when he or she has decided to live and work as a member of the opposite sex, the change of the sex status in a legal manner is urgently requested. It often takes the form of asking for a new or a change or amendment of the birth certificate. As Robert V. Sherwin, author of Sex and the Statutory Law and attorney for the Society for the Scientific Study of Sex rightly pointed out, a birth certificate cannot be changed because it is just that: a certification of a birth. Only its annotation that the birth was that of a male or a female baby (with its name) could possibly be corrected. But only "possibly." "Rules and regulations" may prevent tampering with a "biological document." (How "biological" is a moot question.) I have found doctors with extremely pedantic, bureaucratic minds, occasionally in a political post, expressing their opinions with such arrogant self-assurance that little could be done for their unfortunate victims.

In practice, and in the United States, much depends upon the state in which the applicant for a legal change of sex status bad been born. In some states, it proved to be easy and merely required filling out some form and sending it to the respective Bureau of Vital Statistics, with a doctor's certificate. I have repeatedly used the following statement:

To whom it may concern:

This is to certify that John Doe, now known as Jane Doe, is under my professional care and observation and has been for the past ___ (number of years).

Jane belongs to the rather rare group of transsexuals, also referred to in the medical literature as psychic hermaphrodites.

In ____, 19___, Jane underwent corrective surgery and (number of months) later, I examined her and found that she is no longer able to function as a male, either procreatively or sexually, but that she is able to function as a female - that is to say, she can have marital sex relations.

A legal status as a male would not be consistent with the present facts, and Jane must now be considered of the female gender. I do believe that an unrecognized constitutional factor existed at birth which was responsible for the later development of transsexualism (a condition inaccessible to psychotherapy).

Some few states promptly issued a new birth certificate with the name and gender changed accordingly. In other states, a more complicated procedure was required, namely, a court order. Sometimes that took so much time and money that the applicant gave up and continued to live in his or her "new sex" illegally, hoping that there might never be the need for a birth certificate, for instance, for the purpose of getting married. (A trip to Nevada could then be a way out of it.) Again, in other states, the request was such a novel and unprecedented one that delaying tactics were resorted to or the application was denied, unless proof could be rendered that the original certificate had been issued in error. Such is, of course, not possible in transsexualism (at least not yet), only in clear cases of hermaphroditism. (See Appendix.)

I know of one wise official who issued a new birth certificate if a physician could furnish some laboratory proof indicating abnormal values in the male-female balance (low 17-ketosteroids, for instance). He helped a few operated-upon transsexuals in this way in their new life pattern until, alas, bureaucracy, ignorance, or a combination of these caught up with him and forced him to ignore or reject applications for a legal sex change.

Such a sex change does constitute a problem for a conscientious administrator, for instance, a Health Department official. It has legal as well as medical implications and lawyers as well as doctors may disagree. Could an amendment at a later date disturb statistical data? Would it be legal? Could easy access to a new birth certificate induce some patients to seek the operation who otherwise may have been satisfied to continue in their status quo? (I feel this last question can safely be answered in the negative.)

One thing seems certain. While great conservatism should prevail in advising, consenting to, and performing a conversion operation, all possible help should be given those who present a fait accompli by having undergone the irrevocable step of surgery. It seems to me to be the duty not only of physicians, but also of the community, to pave the way as much as possible for such persons so that they can succeed in their new pattern of life as members of the opposite sex.

Please read the last paragraph again

Would it be possible to empower health departments to issue a "certificate of sex status" based on examinations by one of their accredited physicians? This would leave the birth certificate untouched and at the same time would possibly satisfy the needs of the operated-upon transsexual (see Appendix A, page 165).

In any event, the male transsexual may find no easy road to travel if he wants to be the same law-abiding citizen after the operation that he has been before.

And so, the transsexual's plight exists in the legal field as it does in the medical. That may be partly because there is actually no legal definition of "male" and "female." Such a definition hardly seems necessary since everyone knows the answer, or thinks be does. But we have seen in the preceding pages and especially in the introductory chapter that the still young science of genetics is already confusing the issue. I asked a well-informed and prominent San Francisco attorney, Mr. Kenneth Zwerin, how the law defines the two sexes and his answer is so clear and striking that it is worth recording here:

Mr. Zwerin wrote:

As far as my research discloses, there has never been a judicial decision determining what is meant by the words "male" and "female."

There are many cases that deal with rape committed on the body of a female and other cases which construe the meaning of the term "male issue" for inheritance purposes, but the decisions are silent as to what these words specifically mean.

Our Civil Code permits marriage only between a male and a female, but our court has never been called upon to pass upon the meaning of these designations. Since the courts do not render advisory opinions, I must conclude that the problem has never been judicially raised.

As a layman, I can only conclude that the time may not be far away when the courts may be called upon to decide the actual significance of the male or female genitalia for the determination of one's sex. Neither the genetic nor the psychological sex could then be ignored.

The diagnosis of "male" or "female," made hurriedly at birth, could be questioned, especially in view of future developments. How "biological" and how truthful would the official document then be?

The Female Transsexual

It is probably very unfair to devote only one chapter in this volume to the female transsexual: unfair because her emotional problem is in every way as serious as that of her male counterpart. However, the frequency of female transsexualism is considerably less than that of the male. While the clinical experiences described in the preceding pages are based on 152 cases of male transsexualism, the female transsexuals here reported number only twenty (by the end of 1964). Even so, sometime in the future she may merit a book devoted to her alone.

Frequency of female transsexualism

The proportion between male and female transsexuals in my series is approximately one to eight. According to the international medical literature, carefully scanned by I. S. Pauly, other investigators have found this proportion: one to three or one to four. I myself in a previous publication found the proportion in my own practice at that time to be one to six.

All these figures, however, are of little value as they merely indicate the accidental frequency with which these patients appeared in a particular doctor's office. More significant is the figure of one to three that Dr. Christian Hamburger gives and that was arrived at from letters he received after the world-wide publicity of the Jorgensen case.

Hamburger reported on 756 letters written by 465 patients. There were "three times as many men as women desiring the change of sex." Hamburger believes the reason for the one to three proportion "may be biological in nature"; he continues: "a contributing factor may

also be that the case we reported involved a change from man into woman."

While this particular publicity dealt indeed with the case of a male transsexual, the female patients who wanted to be males may have been equally awakened to the possibility of a sex change, thanks to modern medical advances described in newspaper and magazine articles of thirteen years ago.

If a female transsexual, after having been changed into a male, should receive the same publicity as Christine Jorgensen, it is possible that a greater number of female patients might apply for treatment. How many of them might do so merely as a passing mood, and would then not be acceptable for treatment, is conjectural.

It is interesting to mention in this connection that in our culture about twelve times more women would have liked to have been born as men than vice versa. They said so when they were questioned in a Gallup-type poll. These were normal women, normal in their sex and gender identification. Among them may quite naturally be a very small and statistically insignificant number of female transsexuals.

With this statistic in mind, it may appear puzzling that transsexual women are so much rarer than transsexual men. The more intimate, maternal relationship, however (with its exposure to the mother's female hormones during the nine months of gestation), may offer a possible explanation. (Hamburger's "biological" reason?)

In this connection, the lesser frequency of female homosexual behavior as compared to male deserves to be mentioned again. According to the Kinsey et al. studies, there are about 50 per cent fewer female than male homosexuals and only about 30 per cent reporting overt homosexual activities. Dr. Wardell Pomeroy, coauthor of the "Kinsey Reports," adds the further observation that probably only one eighth as many females as males appear to the public to be "obviously" homosexual ("obvious" are those ordinarily described as "butch" or "dyke").

Symptomatology

The female transsexual has many symptoms in common with the male and much that was said in the previous chapters could apply equally to her.

The female transsexual's conviction that she "was meant to be a man" is as strong as the reverse is in our male patients. She resents her female form, especially the bulging breasts, and frequently binds them

with adhesive tape until a plastic surgeon can be found who would reduce the breasts to masculine proportions.

Transsexual women fall deeply in love with normal or homosexual girls, often those of a soft, feminine type. Besides wanting to be lovers, they want to be husbands and fathers.

One of my patients so much desired to be a father that she allowed one particular man to have sex relations with her until he could impregnate her, but this man then had to relinquish all claims on her and on the child. She reared the child, a boy, as a father would and wanted him to consider her his father, although the child, when old enough, was informed of the fact that "father" was really his mother, but his "natural parent." The psychological impact on the child's mind of this confusing situation is worth studying. The persistent demand of this patient to be treated, operated upon, and "made" a man, and her hostile reactions to the refusals by doctors, have brought her several times into mental institutions with the diagnosis of schizophrenic reaction. For patients of this type, Pauly coined the term "paranoia transsexualis," an apt label but naturally only a label. Whether the patient "reacted" with a psychosis to her transsexual problem with its frustrations, or whether the TS problem should be considered part of her psychosis, is still an unsolved question.

This patient, in spite of a short course of androgen treatment, is still in and out of hospitals, and the question whether to allow her (him?) custody of the child is undecided at this writing. Further studies of her case may deserve publication at some later date.

Menstruation constitutes a psychological trauma to the female TS. Its suppression under androgen therapy affords enormous emotional relief. Interests, attitudes, and fantasies take a masculine direction. Typically masculine occupations such as those of soldier, policeman, truck driver, would be their ideal, but only too often they have to be practical and settle for office work. Just like some of their male counterparts, they frequently show much ability in their work, can be highly successful in business or profession, profiting perhaps by the combination of male and female traits in their constitutional makeup and in their psychological development.

Sex life

Sexually, female transsexuals can be ardent lovers, wooing their women as men do, but not as lesbians, whom they often dislike intensely. They long for a penis, yet mostly understand realistically that the plastic operation of creating a useful organ would be a complicated, difficult, highly uncertain, and most expensive procedure. Only one of my twenty patients had the operation performed in several

stages, but the final result is still questionable. The first surgical attempt, as his doctor explained to me, was ruined because the patient went horseback riding too soon!

I have had extensive correspondence with another intelligent female transsexual whom I never met personally. He described 33 plastic operations, but the male organ, although serviceable, still does not seem fully satisfactory. The technique of creating a penis varies greatly with the various surgeons who have attempted it. The textbook by Gillies and Millard goes into considerable detail. The Russians are said to have more extensive experience with this type of operation than anybody else.

In some instances, a prothesis, an artificial penis made of a plastic material, has been successfully employed. In the United States it is available with difficulty and on a doctor's prescription only. It is easier in Europe, and simpler still in the Orient.

Of the twenty patients, five had been married as women before I ever saw them. These marriages were entered into either in the hope that it might reverse the psychological trend, or under pressure from the family, or to escape family supervision. All these marriages failed, ending in annulment or divorce, or, in one instance, in a reversal of roles with the wife becoming the husband and the former husband becoming the wife. Some were never consummated and were highly unpleasant experiences, probably for both partners. There were four pregnancies in three patients with one abortion, one miscarriage, and one ending in normal birth twice. This person, living as a male (whether married as a male is unknown) now has two children to which "he" is the mother.

The technique of sex relations naturally varies greatly. Petting and kissing are followed by some form of genital caressing. Mutual masturbation by manual stimulation is probably as frequent as oral-genital contact. Most desired and perhaps most frequently practiced is the face-to-face position of an imitation of the heterosexual coitus, the transsexual female on top, rubbing the clitoris against the partner's genital region. This is accomplished by the TS's closed legs between those of the girl, which are spread apart, or by intertwining the legs, known as "dyking."

Etiology

Much that has been said on etiological speculation for the male transsexual applies equally to the female, especially as far as conditioning is concerned. Definite conditioning could be proved in only two cases, and not at all in eleven. The remaining seven were considered doubtful.

The relatively large number of only children (five out of twenty) would lead one to think that the parents wanted the child to be a boy, because this is the more frequently desired gender for the first or only child (carrying on the family name, and the like). Accordingly, parents may be tempted to rear the child as a boy, even if it were a girl. But those parents who could be questioned did not confirm this view. One mother especially insisted that she wanted a daughter and never became reconciled to the fact that this daughter, an only child, had made a successful change to a man. The same strong resentment of a mother against having a son in later life, instead of a daughter, was evident in at least three other cases.

Even if conditioning played its part in the development of female transsexualism, the constitutional "predisposition theory" is by no means refuted (see Chapter 5). As one mother told me: "In her earliest years, long before she became a tomboy, I knew there was something wrong with my little girl. She was always so much more like a boy." In such a situation, it would be easy to imagine that parents could be conditioned by their child, rather than the other way around.

In nineteen of the twenty patients, the first evidence of a false gender identification was reported in "early childhood." It is unknown in one case.

Physical data

The physical examination of the female transsexual usually reveals a normal girl except that, as in the male, hypogonadism seems to be more frequent than one would expect. Among my twenty patients, it was more or less distinctly evident in nine. There was no sign of hypogonadism in ten, and in one case it is unknown.

The diagnosis of hypogonadism was based largely on the menstrual history, a gynecological examination, and laboratory data. Menstruation had never occurred in one case (primary amenorrhea). It started late (at sixteen or seventeen) in seven cases. At the same time, it was either unusually scanty or irregular or painful.

Gynecologically, a "small uterus" was found in six cases. Skeletal measurements did not reveal abnormalities as often as in the males. No ovarian dysgenesis (Turner syndrome) was seen, but the possibility of this genetic abnormality should not be forgotten if the usual symptoms of infantilism, small stature, and the like exist. (Patients of this type are usually although not always chromatin-negative, that is to say, genetic males. They were, for the most part, reared as girls. They have forty-five instead of forty-six chromosomes with only one X and no Y chromosome (XO).)

One case was that of a female pseudo-hermaphrodite who underwent corrective surgery late in life and had been happily married as a man for five years when he was widowed.

In addition to the gynecological examination, a chromatin study and a hormonal assay, whenever possible, should follow. The latter includes the determination of the 17-ketosteroids, estrogens, F.S.H. (follicle-stimulating hormones of the pituitary) in a twenty-four-hour urine specimen. Routine laboratory work, including liver function tests, should be added as well as vaginal smears for estrogen activity.

Social position

The social and education levels were divided into upper, middle, and lower levels. The upper level included those who bad graduated from high school or had some college education. The lower level never finished grade school, and the middle was in between. The social, economic, and cultural position of the family could, however, modify the classification so that a girl with a "middle" education but from a well-to-do or socially prominent family might be classified as "upper level."

Six of the twenty patients thus were upper level, twelve were middle, and only two were lower level.

The following occupations were ascertained:

Occupation	Number
Artist	2
Entertainer	1
Librarian	1
Engineer	2
Selling	1
Ranching, farming	3
Office work	6
Factory work	2
Restaurant	2

Naturally there were changes in stated occupations, especially after treatment or operations, and even more so after a legal change of sex status had been accomplished: changes in the pattern of their lives, for instance disposing of female attire, occurred more gradually in the female because the "change" in the male is naturally more abrupt owing to his more visible conversion operation.

Management - treatment

The patients who came for consultation and possible treatment were mostly in their twenties (twelve), one in her teens, four in the thirties and three in the forties; 30.3 was the average age as compared to 29.3, the average age of the male transsexual when first seen.

If the patient is underage, the parent's or guardians written consent for treatment must be procured.

The most immediate help to these often very disturbed and deeply unhappy girls is to lend a sympathetic ear to the descriptions of their lives and their ambitions for the future. Ridicule, moralizing, or hostile rejection is as unethical, harmful, and ineffective as it is in the male TS.

Great emotional relief is obtained, if the doctor does not refuse offhand the hormonal (androgen) treatment, and does not try to eliminate the possibility of surgical intervention at some time in the future. If he insists on psychotherapy instead, he may do more harm than good. Mere psychiatric evaluation, however, is usually accepted.

The immediate method of choice as to therapy would then be a series of androgen injections to the point of suppressing menstrual periods and keeping them suppressed with the smallest possible dose. I found Squibb's Delatestryl the best preparation because it is highly potent and slow-absorbing, therefore requiring at most one injection a week; 1 cc. of Delatestryl contains 200 mg. of testosterone. I usually started with ½ cc. (100 mg.) to ¾ cc. (150 mg.) weekly until the first menstruation had been missed and the vaginal smear showed distinctly decreasing cornification (indicating lowered estrogenic activity). How soon this can be accomplished depends upon constitutional factors, but with 500 mg. monthly, menstruation usually ceases after perhaps one more period. As soon as amenorrhea is established, two injections a month of ¾ to 1 cc. each (150-200 mg.) were generally sufficient to preserve this - for the patient - happy state.

The masculinizing side effects of the treatment are likewise helpful for the patient's emotional balance. Very gradually, there may be more hair growth on face and body, a slightly deepening, somewhat husky voice, better physical strength as measured by a hand dynamometer and often a gain in weight which, of course, could be due to water retention. An occasional diuretic or a saltpoor diet is then indicated. It is wise to warn the patient that sometimes facial acne may develop and if severe enough, may require interruption of the treatment. A menstrual period may then promptly reappear. A thinning of scalp hair

is a theoretical possibility under androgen medication, although in practice I have never seen it occur.

Sexually, a heightened libido is almost regularly reported and a more or less distinct increase in the size and sensitivity of the clitoris takes place. In some patients, the clitoris grew enough to serve as a small penis.

Whenever the libido seemed to become unduly strong, one may add small doses of progesterone to the testosterone injection, but that again may counteract to some extent the suppressing influence on the menses. It is therefore rarely useful before a hysterectomy has been performed. A tranquilizer by mouth can help.

I have seen little help from oral androgen preparations. Besides, several of them contain methyl testosterone which should certainly not be taken for any length of time as it may be dangerous to the liver.

Surgery

A total hysterectomy, including the removal of the ovaries, is often as ardently desired by the female transsexual as the male desires his conversion operation. It is almost as difficult to obtain because surgeons, quite naturally, are reluctant to remove healthy organs.

After a more or less extended period of androgen treatment, a physical state resembling pseudohermaphroditism (enlarged clitoris, body hair, etc.) develops, so that some surgeons at times felt justified in operating, especially if the social status (male) of the patient is already well established. In several instances, the patient was not fortunate enough to find a surgeon in the United States and had to go abroad or to Mexico for the operation.

Of the twenty female transsexuals here reported, nine had a hysterectomy performed. In eight it was total and in one the ovaries were retained. The average age of the nine patients at the time of the operation was 35.5. Four patients were in their twenties, two in their thirties, two in their forties and one in the fifties, at the time of operation. The corresponding average age in male patients was 33.2.

It seems strange that the conversion operation for the female does not, as a rule, include the closing of the vagina. To the best of my knowledge, it was done in only one instance. Such closing would justify the statement later on that the patient, could no longer function as a female, even sexually, and that in turn, should make the legal change of the sex status (for instance, by issuing a new birth certificate or amending the original one) a good deal easier.

A mastectomy, the reduction of the breasts so that they resemble the male, is at least as important to many patients as the genital surgery. It all depends upon how large the breasts are (even after androgen treatment may have caused a shrinkage) and how disturbing the "bulge" is for the patient's particular mode of living and for the sex life. The sex partner's taste in this respect may be a decisive factor. This plastic operation is almost as difficult to obtain in the United States for the female as the hysterectomy. Some surgeons have refused the patient's request until after a hysterectomy and androgen treatment had created a more masculine personality and with it, an acceptable indication.

Mastectomy alone was performed in five of the twenty cases, both mastectomy and hysterectomy also in five cases. Four patients bad a hysterectomy but no mastectomy. Since I have unfortunately lost contact with several patients, it is possible, even probable, that more of them have had either one or the other or both operations performed.

Sixteen of the twenty patients received androgen therapy. The doses of testosterone after ovariectomy can be considerably smaller than before, when menstruation had to be suppressed. Further masculinization post-operatively is advisable for the patient's emotional state. It is also useful to prevent the symptoms of an artificial menopause. Sometimes tablets alone of testosterone propionate are sufficient. Buccal tablets such as Schering's Oreton Propionate are to be preferred. They are not swallowed but put under the tongue or between the cheek and gums, where they are absorbed by the mucuous membrane of the mouth. The use of methyl testosterone tablets is not advisable because, as previously mentioned, their prolonged administration may harm the liver.

Results of therapy

Psychotherapy with the purpose of having the patient accept herself as a woman is as useless in female transsexualism as it is in male. Psychotherapy can be helpful only as guidance and to relieve tension, provided there is a permissive attitude on the part of the doctor regarding masculinization. If the patient is of age, not acutely psychotic, and reasonably intelligent, the doctor might best say: "as to masculinization and your future life, you have to make your own decision."

The results of either androgen therapy or operations or both have generally been decidedly satisfactory. With one doubtful exception (to be mentioned later), all patients under my observation (and I know the fates of fifteen of the twenty fairly well) were benefited. They still have problems. There still can be spells of depression (mostly reactive)

and more or less distinct neurotic or psychoneurotic traits. They were unhappy, disturbed persons before any treatment and they are not boundlessly happy and free of disturbance afterward. Who is? But they are better off; better able to find a satisfactory niche in life, perhaps in a job or profession as a bachelor or as a married man.

A person born with a congenital hip disease is a cripple. After an operation, he is not orthopedically normal, but he can get around with reasonable ease and comfort. That would be a comparison.

The aforementioned young lady, a student and musician, who seems to have had a doubtful result from her treatment and operations (hysterectomy with the ovaries retained, and mastectomy), was seen about ten years ago. She had been married and divorced, had several years of psychoanalysis, but still wanted to change. After the operation she tried living as a man, then changed her mind and returned to her female role. She even had the shape of her breasts restored by plastic surgery. But she is not unhappy and has no regrets. Her "double sex" may give her a feeling of satisfaction. Unfortunately I have had no opportunity to see her in recent years, but I know from correspondence and from her physician that she feels her therapeutic attempts "basically have worked."

Of the remaining eight patients who underwent hysterectomies, the result in one is unknown. In the other seven, it must be called good, if not excellent.

Six patients are married as men to women. Two married before and four after their operations. There has been no divorce. Two patients experienced marriage both as female and male.

One twenty-six-year-old, disturbed, unhappy girl is now, four years later, a busy, handsome, bearded young man, proud husband of a beautiful wife and father of two legally adopted children.

One confused, unhappy girl, after two disastrous marriages, an attempted suicide, years of futile psychoanalysis is now, seven years later, a man in his early forties, of some importance in the art world, married to a highly intelligent woman and living in an environment where very few of the numerous friends of this couple have any idea of the husband's past.

Still another woman, prominent in society, the sports world, and business, but suffering intensely under her false gender identification, underwent treatment and operation at forty-six. Now, after three years of treatment and after surgery, this handsome, youthful man is married to an attractive woman, continues actively and energetically in

more than one business, and is fully accepted as a man by friends and associates, many of whom "don't know."

George (formerly Ann), now forty-three, comes from a different environment. She has had a hard time all her life making a living. An only child, her mother was hostile to the idea that her daughter should follow her desire to become a man. The father was not interested and so George-Ann went her, or rather his, own way, lived as a man as best he could in different jobs, hoping and working for the day when finances would allow him to get rid of the "curse" of the female, the menstrual period, and live the life that he felt was the only one in which he could find peace of mind and a measure of happiness.

The day came when a surgeon with courage and compassion performed a hysterectomy. Androgen treatment had paved the way and is completing the transformation. An infinitely happier person is now looking for the right outlet for his many fine qualities. His chances, I feel, are ever so much better than hers were five years ago.

Bobby, formerly Mary, is a very similar person, even in appearance and manners, although there is no relationship whatever. When first seen ten years ago at the age of thirty-seven, he was living and working as a man. He had been successful in obtaining a complete hysterectomy as well as a mastectomy and his greatest problem was a legal change of sex status. Red tape offered formidable obstacles. After waiting several years, and with the help of various medical certificates, a new birth certificate was finally issued with strikingly good results on the emotional life and his job prospects. Bobby is now reasonably successful as an architect, gets along with people much better than in years past, and his only regret is that his aged mother never became reconciled to the change, although an older sister had readily done so. Bobby has some flair for writing. He is doing his autobiography now, the first one written by a female transsexual for possible publication as a book.

More cases could be related, almost equally satisfying. There are those for whom an operation is not yet attainable, but androgen treatment is at least a partial substitute. A great and deeply disturbing handicap for some is their inability to secure for themselves the legal change of sex status. But there are prospects that conversion operations and treatments will eventually be recognized by the medical profession as accepted therapy for the transsexual state, female as well as male. Legal and administrative processes would then have to follow suit and a way would have to be found to overcome the technical and bureaucratic barriers that now exist in almost every state in the United States. Those few states, however, that have cut through red tape, issued a new birth certificate (probably with retention of the old one in their files) and have therefore helped the patients greatly in their new

lives, certainly deserve the highest credit for their logical and humane actions.

Appendix A
Concluding Remarks and Outlook
(December 15, 1965)

The collection of statistical data in the preceding pages was closed at the end of 1964. Toward the end of 1965, a total Of 307 cases of the transvestite-transsexual phenomenon were observed. Among them were 193 males (S.O.S. IV, V, and VI); 62 of them were operated upon. Besides, there were 27 female transsexuals; 11 of them had either hysterectomies or mastectomies or both performed. The rest of the males were transvestites.

The additional number of clinical observations has not materially changed a tentative facit drawn from the clinical material presented in this book. A few definite factors seem to have emerged.

The etiology of the transsexual state is still largely obscure, but a light seems to blink here and there in publications from the laboratories of brain physiologists.

Childhood conditioning and possible imprinting undoubtedly have a connection with the development and the intensity of the transsexual phenomenon, but can only be considered as contributory or as one of several possible causes. The presence of an inborn, organic, but not necessarily hereditary origin or predisposition appears more and more probable. Further research, aside from psychological and endocrine studies, will most likely have to concern itself primarily with work in two areas: genetics and neurophysiology.

Ever greater refinements in genetic (chromosomal) studies may find a clue. Brain physiological experiments and neurological investigations may hold even greater promise. Naturally, inborn, that is, organic, abnormalities in the structure of certain brain centers would have their genetic basis. The hypothalamic region of the brain seems to yield more and more information, linking its function (structure? chemistry?) with sex behavior. If it should be confirmed, for instance, that homosexual behavior can develop after organic changes such as the removal of a tumor from a certain brain region, a new and startling aspect of human sexuality, including transsexualism, could emerge as factual, not only as speculative.

Psychological studies will have to continue to clarify the psychological structure of transsexuals. Endocrine studies likewise ,will analyze

abnormalities, but they may have to be interpreted more as an accompanying factor and less as a causative one.

From the therapeutic end, it cannot be doubted or denied that surgery and hormone treatment can change a miserable and maladjusted person of one sex into a happier and more adequate, although by no means neurosis-free, personality of the opposite sex. The degree of such a change depends upon constitutional factors, as well as upon the environment in which the individual's new life pattern will develop.

Sex reassignment surgery, that is to say, a conversion operation, will be accepted eventually as a legitimate treatment for a selected group of transsexuals. Such is at least probable at this writing, unless radically new therapeutic procedures should succeed in bringing the psychological sex into harmony with the anatomical. No such procedures can now be visualized.

Operative techniques will have to be perfected so that the often all-important sex life as a female will be realized in a satisfactory manner.

Legal reforms will have to follow. After a conversion operation, for instance, a way will be found to allow life in the new sex status to be without illegality and such status will be made available without too many technicalities. Common sense will prevail and practical experiences will take precedent over theoretical considerations.

A very recent incident should be reported here, so that the necessity for a future, more realistic approach to the legal problem may be highlighted.

The Health Department in a large eastern city had received several applications from operated-upon transsexuals to "have their birth certificates changed" (and with it their sex status) because they are no longer anatomical males but are now living and functioning as females.

The director of this Health Department, very wisely, turned the matter over to a representative committee of physicians, who studied the novel problem conscientiously. In their report (October 4, 1965), they came to the conclusion that:

1. Male-to-female transsexuals are still chromosomally males while ostensibly females.

2. It is questionable whether laws and records such as the birth certificate should be changed and thereby used as a means to help psychologically ill persons in their social adaption. The Committee is therefore opposed to a change of sex on birth certificates in transsexualism.

The Committee would point out that there are other ways to help these persons by: relief by court order to change name and sex; or amendment of the birth certificate by showing the new sex, but still showing the original sex and the change of sex.

On the strength of this report, this Health Department passed the following resolution:

Resolved, that in view of all the evidence considered, including the report of the Committee of Public Health of the Academy of Medicine, it is the sense of the Board of Health that the Health Code not be amended to provide for a change of sex on birth certificates in cases of transsexuals.

This leaves the transsexual patient abandoned by the medical profession and dependent upon judicial decision.

In the collective opinion of the medical committee (in spite of dissenting voices), the invisible "chromosomal males" outweigh the very visible "ostensible females." In other words, a very practical evidence of sex change, that is to say, the ostensible female sex after a demasculinizing operation, was adjudged inferior to the genetic male sex, which nobody could possibly detect in a person's appearance. Vice versa, the same could apply to female transsexuals.

It shall be assumed that neither the medical committee nor the Health Department could have acted any differently under present circumstances. Eventually, however, this irritatingly academic attitude will have to collapse under the weight of reality. Either the welfare of patients will constitute this reality or new scientific evidence establishing, for instance, the constitutional nature of transsexualism, will do so.

In the latter instance, a similar procedure would appear logical that is now applied in those rare cases when an error has occurred in diagnosing the sex of a newborn baby. The Health Department is then authorized to correct certificates. The original (wrong) certificate is removed and replaced with a new one.

The only difference between a wrong sex-diagnosis at birth and (inborn) transsexualisim would then be the time element, that is to say, how soon after birth either fact is discovered and amply verified.

As far as the legal change of sex after a conversion operation is concerned, the respective patient in the United States in 1965 has to be lucky. He has to have been born in a state that proceeds from good will, cuts through red tape, and issues a new birth certificate on application accompanied by medical testimony. If he is not lucky and

has been born. in a state like the one mentioned above, he has to have money, swallow his sugar-coated pill of disappointment, entrust his fate to a judge, and hope for the best.

References:

Die Tranvestiten. Eine Untersuchung über den erotischen Verkleidungstrieb. Ferd. Spohr Verlag. 1925.

In rare cases a structural abnormality is said to have been found when the abdominal cavity was opened, for instance, ovaries in males. Such a TS would then also be a pseudohermaphrodite.

A few daring surgeons performed "conversion operations" thirty or forty years ago but with very doubtful if not unfavorable results. In most cases, they castrated or removed the penis only, without attempting to create a vagina (see case of Lilly Elbe, as described in Niels Hoyer's Man into Woman, Dutton & Co., 1933).

J.A.M.A., Vol. 152, May 30, 1953, pp. 391-396.

Sexology, December 1949.

"Transvestism and Sex Role Inversion," Chapter in The Encyclopedia of Sexual Behavior, Hawthorne Books, Inc., 1961.

"Inversion and Homosexuality," Amer. J. Orthopsychiatry, Vol. 28, No. 2, April 1958.

Published in the Amer. J. Psychotherapy. Vol. 28, No. 3, July 1964.

Sex is a matter of anatomy and physiology. "Male" and "female" are sexual terms. Gender, however, can be considered a mixture of inborn and acquired, that is, learned characteristics. "Masculine" and "feminine" are therefore expressions belonging to the gender concept.

Lukianowicz, D. D. P., "Survey of Various Aspects of Transvestism," J. Ner vous & Mental Diseases, Vol. 128, No. 1, January 1959.

Burchard, J. M., Struktur und Soziologie des Transvestismus und Transsexualismus. F. Enke Verlag, 1961.

W.B. Saunders Co., 1948.

International J. Sexology, May 1951.

A. Taylor Buckner, in a master's thesis for the University of California, based on a questionnaire sent to 262 subscribers to Transvestia (a magazine for transvestites), reported that the following were worn during intercourse:

Worden, F. C., Marsh, C. T., "Psychological Factors in Men Seeking Sex Transformation," J.A.M.A., April 9, 1955.

Burchard, J., Lecture before the Society for the Scientific Study of Sex, New York, November 2, 1963.

Archives General Psychiatry, August 1965, page 172.

A study to investigate the nature of the hypogonadism (primary or secondary) is now in progress.

Reprinted from Sex & Censorship Magazine, 693 Mission St., San Francisco 5, Vol. 1, No. 2.

"Sexual Aberrations on an Organic Basis, " Modern Medicine, July 5, 1965.

"The Desire for Change of Sex as shown by Personal Letters from 465 Men and Women," Acta Endocrinologica 14, 1953, pp. 361-375.

Stourzh-Anderle, Helene, Sexuelle Konstitution, 1955, Verlag f. Medizinische Wissenschaften, Wien-Bonn.

Schlegel, W. S., Die Sexualinstinkte des Menschen, Ruetten und Loening Verlag, Hamburg, 1962.

1964, Vol. 8, pp. 157-159. Pergamon Press, Ltd.

J. Urology, Vol. 91, No. 4, April 1964.

Ancherson, Per, "Problems of Transvestism," Acta Psych. et Neurol. Scandin.,Suppl. 106, 1956, p. 249.

Kallmann, F. J., Amer. J. Human Genetics, 1952, IV, pp. 136-146.

Ellis, Albert, Advances in Sex Research, Hoeber Medical Division, Harper and Row, 1963, p. 164.

Stoller, R. J., Garfinkel, H., and Rosen, A. C., "Passing and the Maintenance of Sexual Identification in an Intersexed Patient." A.M.A. Archives General Psychiatry, Vol. 2, April 1960, pp. 379-384.

Schwabe, A. D., et al., Pubertal Feminization in a Genetic Male with Testicular Atrophy and Normal Urinary Gonadotropin," J. Clinical Endocrinology and Metabolism, Vol. 22, August 1962, pp. 839-845.

A feminizing influence of estrogen has been demonstrated when a mother, soon after her confinement, began taking birth control pills (which contain estrogen) and at the same time, breast-fed her baby. Enough estrogen entered her milk to produce enlargement of the baby's breasts.

Rudolf Engel, J. Lancet, Vol. 81, 1961, p. 523.

"Homosexuality: A Biological Anomaly," J. Nervous & Mental Diseases, Vol. 99, No. 65, January 1944.

Young, William C., Goy, Robert W., Phoenix, Charles H., "Hormones and Sexual Behavior," Science, Vol. 143, No. 3603, January 17, 1964.

Steinach, Eugen, Sex and Life, Viking Press, New York, 1940.

Science Newsletter, August 28, 1965.

Lorenz, K. Z., King Solomon's Ring. New Light on Animal Ways. The Thomas Y. Crowell Co., New York, 1952.

Green, R., and Money, J., "Effeminacy in Prepubertal Boys. Summary of 11 Cases," Pediatrics, Vol. 27, No. 2, February 1961.

Money, J., Hampson, J. G., and Hampson, J. L., "Imprinting and the Establishment of Gender Role," Archives Neurology and Psychiatry, Vol. 77,1957, p. 333.

Lukianowicz, D. P. M., "Survey of Various Aspects of Transvestism," J. Nervous & Mental Diseases, Vol. 128, No. 1, January 1959.

Prince, C. V., "166 Men in Dresses," Sexology Magazine, March 1962, pp. 520-525.

Raymond, M. J., British Medical J., Vol. 11, 1956, p. 854, and Lancet, March 4, 1961, p. 510.

Dr. J. C. Barker, British Joumal of Psychiatry, March, 1965.

New York Herald-Tribune, July 1, 1957.

Acta Psychiatrica et Neurologica, Scandinavica, Suppl. 106, 1956, p. 253.

Wilson, Robert A., "The Roles of Estrogen and Progesterone in Breast and Genital Cancer," J.A.M.A., Vol. 182, October 27, 1962, pp. 327-331.

Goldzieher, Max A., J. Gerontology, Vol. 1, 1946, p. 196; McBryde, C. M., "Production of Breast Growth by Local Application of Estrogenic Ointment," J.A.M.A., Vol. 112, 1939, p. 1045.

"Testicular feminization" has been described repeatedly and is a well known though rare abnormality. It is a combination of a genetic male sex with testes or a testicular tumor that produces an undue amount of estrogen. The patients, therefore, appear to be normal women externally, with rudimentary sex organs internally. That differentiates them from male transsexuals. See Caffrey and Fitzlen, "The Problem of Intersex," J.A.M.A., Vol. 192, No. 7, May 17, 1965, pp. 641, 642.

Masters, W. H., "The Sexual Response Cycle of the Human Female, II. Vaginal Lubrication," Annals N.Y. Academy Science, Vol. 83, 1959, pp. 301-317; Masters, W. H., and Johnson, V. E., "The Physiology of Vaginal Reproductive Function," West. J. Surgery, Obstetrics, Gynecology, Vol. 69, 1961, pp. 105-120.

Sexology Magazine, December 1963. Dr. Benjamin is a prominent N.Y. endocrinologist and specialist in sexology. He was consulting endocrinologist of the College of the City of New York and has contributed to numerous scientific and medical journals.

J.A.M.A., Vol. 152, May 30, 1953, pp. 391-396.

Quoted from the release of August 6, 1964, from the office of public information of the University of California Medical Center.

New York Herald-Tribune, December 10, 1964.

Quoted from Science Newsletter, Oct. 22., 1965, p. 264.

Per Anchersen, "Problems of Transvestism," Acta Psychiatrica et Neurologica, Supp. 106, 1956.

Birker, H., and Klages, W., "Der Transvestismus, als Socialmedizinisches Problem," Zeitschrift für Psychotherapie & medizinische Psychologie. Vol. 11, 1961, p. 1.

Robert V. Sherwin, "The Legal Problem in Transvestism," in a Symposium on Transsexualism and Transvestism. Amer. J. Psychotherapy, Vol. 3, No. 2, April 1954.

Harpers´ Magazine, January 1965.

Oceana Publications, New York, 1949.

Pauly, I. S., Archives General Psychiatry, Vol. 13, August 1965, p. 172.

Hamburger, Christian, "The Desire for Change of Sex as Shown in Personal Letters from 465 Men and Women," Acta Endocrinologica, Vol. 14, 1953, pp. 361-375.

Sexology Magazine, May 1965, p. 653.

Principles and Art of Plastic Surgery, Little, Brown, 1957.

Petit-Dutails, D., et al. Revue Neurologique 91: 129-133, 1954. (Homosexual behavior was observed in patients with temporal lobe lesion.)

Anastasopoulos, G. Wiener Zeitschrift für Nervenheilkunde XVI: 131-161, 1959. (Draws attention to "the feminine behavior of male patients with temporal lobe lesions who had previously shown no homosexual tendencies.")

Citation: *Harry Benjamin M.D.*

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Anabolic Steroid Abuse and Dependence

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Anabolic-androgenic steroids (AAS) are mainly used to treat androgen deficiency syndromes and, more recently, catabolic states such as AIDS-associated wasting. There is no evidence in the reviewed literature that AAS abuse or dependence develops from the therapeutic use of AAS. Conversely, 165 instances of AAS dependence have been reported among weightlifters and bodybuilders who, as part of their weight training regimens, chronically administered supraphysiologic doses, often including combinations of injected and oral AAS as well as other drugs of abuse. A new model is proposed in which both the "myoactive" and psychoactive effects of AAS contribute to the development of AAS dependence. The adverse consequences of AAS are reviewed, as well as their assessment by means of a history and physical, mental status examination, and laboratory testing. When patients with AAS use disorders are compared with patients with other substance use disorders, both similarities and differences become apparent and have implications for treatment.

Introduction

Anabolic-androgenic steroids (AAS) are synthetic derivatives of the male hormone, testosterone, which bind androgen receptors to produce both anabolic (body building) and androgenic (masculinizing) effects (Table 1). Anabolic-androgenic steroids are primarily indicated and prescribed to treat androgen deficiency syndromes [1], some types of anemia, and hereditary angioedema (a rare skin condition) [2]. Increasingly, they are used to treat AIDS-associated wasting (malnutrition) [3,4] and other catabolic conditions [5–8]. Less common medical uses of AAS have been reviewed elsewhere [1–3,9]. Importantly, no cases of abuse or dependence have been described in men or women who received or self-administered therapeutic doses of AAS for legitimate medical indications. Nevertheless, AAS are classified as Schedule III controlled substances, because using them for nonmedical purposes, such as enhancing physical appearance, can lead to abuse and dependence in both men and women [10,11•,12].

Patterns of nonmedical use

Illicit AAS are usually administered orally or by injection, although transdermal skin patches are also available pharmaceutically. Injection occurs into large muscle groups (buttocks, thigh, or shoulder) or subcutaneously, but not intravenously. Needle sharing is reportedly uncommon, but does occur [13]. Users typically take steroids in "cycles" of 6 to 12 weeks, followed by 6 to 12 weeks off AAS, although longer cycles of use occur. At the beginning of cycles, small doses are taken with the intent to build to larger doses, which are then tapered at the cycle's end. Initial patterns of cycling on and off AAS, however, may develop into continuous patterns without AAS-free intervals, as users try to secure muscle gains while avoiding withdrawal symptoms. Typical AAS doses reach 10 to 100 times the amounts ordinarily prescribed for medical purposes, and users often combine multiple oral and injected AAS to achieve the desired amount. Because illicit steroids commonly contain falsely labeled contents as well as veterinary preparations [14,15], the actual human dosage is usually unknown.

Table 2 lists drugs that are commonly combined with AAS to augment their effects, to manage unpleasant side effects, or to avoid detection by urine testing. Anabolic-androgenic steroid users are also more likely to use alcohol and other drugs of abuse than AAS nonusers are [16–19]. Consistent with elevated alcohol intake in human AAS users, AAS-treated rats increased their voluntary alcohol consumption compared with control-treated rats [20]. Anabolic-androgenic steroids may even serve as a gateway drug to other illicit drug use [21]. Combining AAS with other drugs may lead to adverse interactions. Amphetamines, for example, may increase the overdose potential of AAS due to cardiotoxicity [22•]. Anabolic-androgenic steroids may also increase the reinforcing properties of amphetamine [23], an effect that could favor increased self-administration of both drug classes together. Bromocriptine, used in combination with AAS to reduce body fat, was recently associated with syncopal episodes and atrial fibrillation [24]. In animals, AAS increase cocaine-related seizures [25] and potentiate cocaine-induced increases in heart rate [26]. Autopsies involving human AAS users commonly reveal mixed substance use [22•].

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Table 1. Commonly used anabolic-androgenic steroids

Injected testosterone esters (C-17-β ester derivatives)*
Testosterone cypionate
Testosterone enanthate
Testosterone ester mixtures
Testosterone propionate
Testosterone undecanoate
Other injected compounds
Boldenone undecylenate†
Methenolone enanthate
Nandrolone decanoate
Nandrolone phenpropionate
Stanozolol†
Trenbolone acetate†
Trenbolone hexahydrobencylcarbonate
Oral agents (c-17-α alkyl derivatives)‡
Ethylestrenol
Fluoxymesterone
Methandrostenolone or methandienone
Methenolone
Methyltestosterone
Oxandrolone
Oxymetholone
Oxymesterone
Stanozolol

*Metabolized to testosterone and estradiol; less toxic to liver and cholesterol levels.
†Veterinary compound.
‡More toxic to liver and cholesterol levels.

Medical consequences of use

Adverse consequences of using AAS for nonmedical purposes have been reviewed elsewhere [27•,28••–30•], and will be briefly summarized here. Unfortunately, the long-term health risks of nonmedical AAS use are poorly studied [30]. Therefore, neither safety nor catastrophe can be reliably predicted with long-term use, and longitudinal investigations of AAS users are needed. Many common side effects of AAS are reversible at discontinuation. Other reported consequences such as myocardial infarction are infrequent, but obviously irreversible.

Endocrine effects are gender specific. Men may manifest male-pattern baldness, gynecomastia, testicular atrophy, prostatic hypertrophy, and low sperm counts resulting in sterility [31]. Gynecomastia may require surgical intervention in some cases, because of irreversibility and tenderness [32]. Women may manifest menstrual irregularities and masculinizing effects such as increased hair growth, breast tissue atrophy, deepened voice, and clitoral hypertrophy [14]. The latter two effects are often irreversible. Both genders manifest acne in response to hormonal stimulation of sebacious glands.

The cardiovascular and hepatic consequences AAS receive much attention, because of reported fatalities from myocardial infarction, cardiac arrest, stroke, and liver tumors. Anabolic-androgenic steroids, especially the oral (C-17-alkylated) forms (Table 1), alter the cholesterol profile by decreasing high-density lipoproteins and increasing low-density lipoproteins, an effect that favors coronary artery disease, but is fortunately reversible after drug discontinuation. Animal studies suggest that AAS are also toxic to myocardial cells [33]. These observations support an association between AAS and heart disease, and epidemiologic studies are needed to confirm this. The C-17 alkyl forms of AAS are also more likely to cause liver dysfunction than the injected testosterone esters. Adverse hepatic effects include cholestatic jaundice, benign and malignant tumors, and peliosis hepatis (blood filled cysts that may rupture and cause death). Some tumors are reversible after discontinuing AAS.

Anabolic-androgenic steroids may predispose people engaged in strength training to tendon injuries and neuropathies, and animal studies indicate that AAS can damage and weaken collagen fibers in tendons [34]. Other adverse effects attributed to AAS include sleep apnea, exacerbation of tic disorders, polycythemia, and isolated cases of non-hepatic neoplasias. Children who use AAS before and during puberty may suffer from short stature resulting from premature closure of bone plates. Finally, premature mortality has been demonstrated in AAS-treated rats and suggested in humans [35].

Psychiatric effects

Anabolic-androgenic steroids have been associated with depression, mania, psychosis, suicide, and marked aggression leading to violence and homicide [22,29,36,37•,38]. Conversely, they have been used therapeutically to improve mood and alleviate depression [39,40]. Either way, AAS are generally recognized by psychiatric researchers to have psychoactive properties [40].

In a post-mortem study of 34 deaths among users of AAS [22•], mortality resulted from suicide in 11 cases, homicide in nine cases, automobile accidents following reckless driving in two cases, and polysubstance-related causes in 11 cases (*eg*, mixing AAS with heroin, amphetamines, or alcohol). Clearly, psychologic factors were involved in all 34 cases.

The prevalence of AAS-induced psychiatric disorders and effects has been difficult to determine, because of sampling biases inherent with both clinical case reports and convenience samples of AAS users. Pope *et al.* [37•] reviewed four prospective, placebo-controlled trials and conservatively estimated that at least 5% of AAS users will have manic or hypomanic reactions, effects that appeared to be substance induced and dose dependent [29]. However, experimental studies of AAS administration cannot ethically mimic the extreme doses and combinations of AAS taken by nonmedical users, so rates of AAS-induced mental disorders are likely higher. Indeed, rates of psychiatric disorders noted in several diagnostic studies of selected AAS users have been more than 5%. However, a number of factors can increase the likelihood of psychiatric effects including prior psychiatric history, alcohol and

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Table 2. Drugs used in combination with anabolic-androgenic steroids

Drug	Reasons for use	Comments
Amphetamines	Increase endurance, burn fat	Stimulant
Androstenedione*	Increase muscle mass and strength	May be purchased over the counter
Bromocriptine	Burn fat	Dopamine agonist
Caffeine	Increase endurance	Over the counter stimulant
Clenbuterol	Increase muscle mass, burn fat	β-agonist
Clomiphene	Prevent gynecomastia; increase gonadotrophins	Blocks estrogen receptors
Clonidine	Increase muscle mass and strength	Via increased growth hormone
Creatine	Increase muscle mass and strength	Over the counter food supplement
Dehydroepiandrosterone	Increase muscle mass and strength	May be purchased over the counter
Diuretics	Decrease anabolic-androgenic steroid-induced edema; dilute urine	Hydrochlorothiazide, furosemide
Ephedrine	Increase endurance, burn fat	Over the counter stimulant
Erythropoietin	Increase endurance	Injected
Gamma-hydroxybutyrate	Increase muscle mass and strength	Via increased growth hormone
Human chorionic gonadotrophin	Increase endogenous testosterone; prevent testicular atrophy from anabolic-androgenic steroids	Injected
Human growth hormone	Increase muscle mass and strength	Injected
Insulin-like growth factor	Increase muscle mass and strength	Injected
Levodopa	Increase muscle mass and strength	Via increased growth hormone
Levothyroxine	Increase endurance, burn fat	Thyroid hormone
Opioids	Decrease pain from workouts and injuries	Supplied by dealers of anabolic-androgenic steroids
Probenicid	Mask urine testing	Decreased renal excretion of drugs
Tamoxifen	Prevent gynecomastia	Blocks estrogen receptors
Testolactone	Prevent gynecomastia	Inhibits estrogen synthesis

*The immediate precursor of testosterone [2].
Some over the counter ergogenic drugs [68,69] have been associated with heavy drinking, driving after drinking, and physical fights [70].

other drug use [41], and comorbid medical conditions. For example, a recent report described a man with Axis II psychopathology who developed psychosis after receiving therapeutic doses of an anabolic steroid for burn injuries in combination with lorazepam and opioids [6]. Expectancy effects may also play a role in mental status changes; for example, it has been suggested that people who expect to become aggressive on AAS do become aggressive.

Some investigators point out that many of the psychiatric effects that are attributed to AAS might result from the type of person who uses them or the effects of weight training itself. For example, the large number of nightclub doormen in one sample [38] confounded high levels of aggression in a recent study of AAS users. Moreover, weight training without AAS use can improve mood [42]. Nevertheless, psychiatric effects following high doses of AAS have been reported in healthy volunteers without a prior history of weight training or mental disorders [37,43••].

Sharing needles or syringes, having unprotected sex with multiple partners, reckless driving, and using other harmful drugs have been noted in some AAS users [13,22•,44]. One explanation is that AAS may induce mental states characterized by impulsivity and poor judgment. Another explanation is that people who accept the risks of taking AAS may exhibit generalized risk-taking tendencies.

The mechanisms underlying the psychiatric effects of AAS remain poorly understood. A recent experimental study found significantly higher levels of 5-hydroyindoleacetic acid (5-HIAA) in the cerebrospinal fluid of methyltestosterone- versus placebo-treated men. Moreover, the increased 5-HIAA levels were significantly correlated with AAS-related effects such as increased energy, diminished sleep, and sexual arousal [43••]. Other studies suggest that AAS-induced increases in substance P and vasopressin [45,46], as well as alterations in central opioid systems [20,47], may be related to aggressive behavior.

Addiction potential

In a previous review of the scientific literature [11•] published between 1988 and 1998, evidence was cited that AAS dependence is a diagnosable mental disorder (Table 3). Between 1999 and 2000, two more diagnostic studies of AAS dependence were published [10,12] including the second known instance of dependence in women. Altogether, the medical literature contains a total of at least 165 AAS users who met criteria for dependence (Table 3). Therefore, AAS dependence is readily identifiable if one samples the right population and asks the usual diagnostic questions.

A withdrawal syndrome from AAS has been described that can last for weeks to months, and consists of depressed

Table 3. Medically published instances of anabolic-androgenic steroid dependence

Authors	Users, *n*	Dependent, *n*
Case reports and series		
Tennant *et al.* [49]	1 man	1
Brower *et al.* [71]	1 man	1
Brower *et al.* [72]	8 men	6
Hays *et al.* [73]	1 man	1
Copeland *et al.* [74]*	1 woman	1
DSM Diagnostic Surveys		
Brower *et al.* [75]	49 men	28
Gridley and Hanrahan [76]	21 men	12
Pope and Katz [77]	88 men	22
Malone *et al.* [78]	71 men; 6 women	11†
Midgley *et al.* [10]	50 men	13
Copeland *et al.* [12]	94 men; 6 women	23 (21 men; 2 women)
Addiction Treatment Center Survey		
Clancy and Yeats [79]	64 men; 4 women	47†
Total instances of anabolic-androgenic steroid dependence		165

DSM—Diagnostic and Statistical Manual of Mental Disorders.
*Case report by Copeland *et al.* [74] is not included in the total, because it is double-counted in the study by Copeland *et al.* [12].
†Number of women not specified.

mood, fatigue, a desire to take more AAS (craving), restlessness, anorexia, insomnia, and decreased libido [11•,48]. Many of these symptoms are the opposite of effects observed during AAS administration (hypomania and increased energy, appetite, and libido). In the 1980s a biphasic course of withdrawal was proposed, based on a single case report [49], with an initial phase lasting for 1 week or less that resembled opioid withdrawal, and a second phase characterized by depressive symptoms and craving. No other observations of an opioid-like withdrawal state have appeared in the literature, and a recent study in rhesus monkeys failed to find naloxone-induced withdrawal phenomena following high-dose AAS administration [50]. Even though AAS do interact with opioid systems in several discrete areas of the brain [20,51,52], the evidence for opioid-like withdrawal and a biphasic course is extremely weak.

A Proposed Model of Anabolic-androgenic Steroid Dependence

All 165 cases of AAS dependence reported to date have occurred in dedicated weight trainers who were motivated to either compete athletically, achieve an extremely muscular appearance, or intimidate and fight potential rivals. All cases have also occurred in a societal context that highly rewards and values people who win sport competitions and appear physically fit and attractive [53]. It is possible, then, that AAS are predominantly reinforcing due to their *muscle-active effects*, in contrast to traditional drugs of abuse (*eg*, heroin and cocaine) that have immediate *psychoactive effects* related to their rapid stimulation of brain reward mechanisms. Indeed, the notion that AAS are immediately reinforcing because of their psychoactive effects has reasonably been challenged [54], even though users may report euphoric and antidepressant effects with continual high-dose administration [27•]. A model of AAS dependence, therefore, must account for the actions of AAS on both muscle and brain tissue in the development of dependence.

A new model of AAS dependence is proposed in which its development occurs primarily in a sociocultural context that motivates certain individuals, particularly men, to attain large and strong muscles for specific purposes. Attaining the desired increases in musculature requires frequent and intensive weight training sessions that become time-consuming and driven, but may also improve mood and self-esteem [42]. Weight training is accompanied by strict dietary regimens. These rigorous regimens of diet and weight training when combined with AAS remain highly goal-directed, compared with the activities of "traditional" drug addicts, which appear to be directed mainly at obtaining and using more drugs for their temporary euphoric effects. At this stage, the reinforcing actions of AAS derive mainly from their muscle-active effects [10], and the compulsive patterns of AAS use parallel the somewhat compulsive patterns of training and diet. Professional treatment for addiction is unlikely to be required at this stage even if users appear to fulfill *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DMS-IV) criteria for dependence on AAS. Rather, users can be expected to discontinue AAS on their own when the goals of increased muscularity are no longer required (such as when a professional athlete retires from competition). This could explain why so few AAS users present for addiction-specialized treatment [55•].

Weight trainers typically and sometimes correctly believe that chronic, high-dose exposure to AAS (in addition to their intensive training regimens) is required to maximize their gains in muscularity. Such high-dose

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administration of AAS increases the likelihood of psychoactive effects [37] that could possibly reinforce repeated drug administration. Recent animal studies support the hypothesis that supraphysiologic doses of AAS act on brain-mediated reward systems[51,56–60]. For example, increased levels of beta-endorphin have been reported in the ventral tegmental area [61] and midline thalamus [52] following chronic administration of AAS. Other work implicates dopamine including AAS-induced changes in dopamine receptors in the nucleus accumbens and ventral tegmental area [60]. Recently, the first demonstration of self-administration of AAS by animals was reported [57]. Another animal model of drug dependence is the conditioned place preference paradigm. Recent studies indicate that 3-alpha-androstanediol, a neurosteroid and testosterone metabolite, may mediate conditioned place preference through its actions in the nucleus accumbens [58,59]. Therefore, a second stage is hypothesized during which chronic, high-dose exposure to AAS activates brain-mediated psychoactive effects that augment the "myoactive" dependence on AAS.

In summary, a two-stage model of AAS dependence is proposed. In Stage 1, high-dose AAS are used for their muscle-active effects in conjunction with strict dietary and intensive weight training regimens. The combination of goal-directed activities (weight training, diet, and AAS use) consumes large amounts of time and replaces other activities, continues despite medical and social problems, and is greatly missed and desired if temporarily interrupted. In addition, the AAS user may sometimes feel that the activities are "out of control" when expressing doubts about their value and doing them. At this stage in the process, the AAS user will appear to meet criteria for substance dependence when diagnostic questionnaires and interviews are applied. However, this stage of dependence is greatly confounded by the compulsive quality of weight training [42], and the reinforcing value of achieving large muscle size and increased strength [10]. In Stage 2, chronic, high-dose administration of AAS activates brain-mediated reward systems, similar to other drugs of abuse. Subjectively experienced and objectively observed psychoactive effects such as mood changes and increases in aggressive behaviors characterize this stage of dependence. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* criteria for AAS dependence are met, and users are not able to discontinue AAS despite their desires and attempts to do so. Addiction treatment may be required at this stage, especially when accompanied by other substance use disorders such as alcohol dependence, opioid dependence, or amphetamine abuse.

Identification and Assessment

The process of evaluating potential, suspected, and known AAS users should include a comprehensive history, physical examination, mental status examination, and laboratory testing [55•]. Young men who engage in weight training or sports that require strength or power are at highest risk to use AAS. Thus, a high index of suspicion for these patients is warranted as the evaluation begins.

History

Inquiry may begin with the use and reasons for use of nutritional supplements and over-the-counter ergogenic aids (Table 2), because the use of legal aids commonly precedes and accompanies the use of AAS. The clinician may then ask if the patient knows other people who use AAS, because people who use or are thinking about using AAS are more likely to know other users than low-risk nonusers [62]. Finally, the clinician should ask if the patient has ever tried AAS. If not, the discussion that ensues may help to prevent initiation of use.

If yes, an inquiry into both the benefits perceived as well as the side effects experienced (both medical and psychosocial) is important. It is generally accepted that AAS can increase muscle mass and strength when combined with proper training and nutrition [27•]. When asking about dependence, the clinician must distinguish between the effects of AAS use and weight training [42]. For example, AAS users may spend large amounts of time training with weights, which can interfere with other important activities. However, only time actually spent on obtaining, using, and recovering from the effects of AAS meets the DSM-IV criterion for spending large amounts of time on drug-related activities.

Physical examination

Table 4 lists the potential findings of AAS use that are observable during the physical examination, based on the adverse medical (as well as desired) consequences discussed. Although high blood pressure typically appears in published lists of adverse events with AAS, several studies have failed to find it.

Mental status examination

A broad range of mental status findings has been associated with AAS. Although causation is sometimes debated in the literature for specific findings such as aggressiveness [38], there is no doubt that such symptoms require careful assessment and therapeutic attention when they do occur. Moreover, discontinuing AAS in patients with adverse mental status changes will help to assess and eliminate the role of AAS.

Appearance—marked enlargement of musculature with disproportionate development of the neck, shoulders, and chest. Oversized clothes may be worn to hide the extent of muscular development, especially in self-conscious patients who may suffer from muscle dysmorphia. Facial acne is also seen.

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Table 4. Physical signs of using anabolic-androgenic steroids for nonmedical purposes

Vital signs	Increased blood pressure (relatively uncommon)
Skin	Acne, needle marks in large muscles, male pattern baldness, hirsutism (especially in women), jaundice with liver disease
Head and neck	Jaundiced eyes with liver disease; deepening of the voice in women
Chest	Gynecomastia with tenderness in men; breast tissue atrophy in women
Abdominal	Right upper quadrant tenderness and hepatomegaly with liver disease
Genitourinary	Testicular atrophy and prostatic hypertrophy in men; clitoral hypertrophy in women
Musculoskeletal	Generalized muscle hypertrophy with disproportionately large upper body mass (especially neck, shoulders, arms, and chest)
Extremeties	Edema due to water retention for which diuretics may be used

Behavior—observe for psychomotor agitation or retardation as consistent with manic or depressive states.

Cooperation—a variable that is dependent on the degree of irritability and defensiveness about drug use. Cooperation may be influenced by traits (or AAS-induced states) of competitiveness and aggressiveness.

Speech—usually normal, although deepened voice is heard in women.

Sensorium—usually clear unless frankly manic or psychotic.

Mood—individual may display mania or hypomania with elevated mood or irritability; dysphoria, depression, or marked anxiety may also be seen.

Affect—observe for lability and intensity of expression when mania or hypomania are present.

Thought process—slowed with depressive features; rapid or disorganized with manic features.

Thought content—assess for suicidal, homicidal, and paranoid ideation. Grandiose or persecutory thoughts may progress to delusions.

Hallucinations—not common, but may occur with states of psychotic depression or mania.

Laboratory examination

Anabolic-androgenic steroids users may manifest abnormalities on their urine drug screens, blood work, semen analyses, and cardiac function tests (Table 5). Although urine tests for AAS are commonly employed at different levels of sport, they are not included in the usual drug screens conducted for clinical purposes by most hospital laboratories. Therefore, urine testing for AAS requires a special order in most clinical settings, necessitating shipment to an outside laboratory. Because of the known association between using AAS and other drugs of abuse, the usual urine drug tests for amphetamines, benzodiazepines, cannabinols, cocaine, and opioids should also be ordered

Blood work should include skeletal muscle enzymes, although they can be elevated in both steroid users and nonusers after intensive weight training. Among users, muscle damage may also result from intramuscular injections. In a few case reports involving AAS users, extremely high levels of creatine kinase resulted from rhabdomyolysis [63,64]. Several muscle enzymes are also present in the liver (Table 5). Liver specific tests (*eg,* bilirubin, gamma-glutamyltransferase) and creatine kinase (not released from the liver in clinically significant amounts) may help to distinguish muscle from hepatic damage [63].

Blood concentrations of testosterone and estrogen vary depending on the specific metabolic pathways of ingested AAS. For example, testosterone esters are metabolized to testosterone and secondarily to estrogen, so increased levels of these hormones may be observed. However, testosterone and estrogen levels are decreased by other AAS.

Treatment

It must emphasized that no controlled trials of treatment for either AAS abuse or dependence have been published [48]. Therefore, the material that follows derive mostly from what little appears in the literature and the author's own experiences [55•]. The goals of treatment are abstinence from AAS and other drugs, restoration of health, and improved psychosocial functioning. Needle-exchange programs and medical monitoring of AAS users are well established in Great Britain and Australia [12,38,55•]. Nevertheless, abstinence should be the ultimate goal of treatment, because of the known risks of short-term use (several months to several years) and the unknown risks of long-term use (10 to 20 years or more) [30•].

The treatment of AAS use disorders may be compared with the treatment of other substance use disorders, particularly when AAS use occurs in the context of polysubstance dependence. As with other drugs of abuse, the treatment of AAS use disorders involves the initiation and maintenance of abstinence, as well as the treatment of comorbid disorders. Nevertheless, there are unique considerations when treating AAS users. First, AAS users focus frequently,

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Table 5. Laboratory abnormalities in anabolic-androgenic steroid users

Blood work	
Muscle enzymes	Increased ALT, AST, LDH, and CK
Liver function tests	Increased ALT, AST, LDH, GGT, and total bilirubin
Cholesterol levels	Increased HDL-C; decreased LDL-C
Hormonal levels	Increased testosterone and estradiol (with use of testosterone esters); decreased testosterone (without use of testosterone esters or during withdrawal); decreased LH and FSH
Complete blood count	Increased RBC count, hemoglobin, and hematocrit
Urine testing	
Anabolic-androgenic steroids	Positive
Other drugs of abuse	May be positive
Cardiac testing	
Electrocardiogram	Left ventricular hypertrophy (seen in intensive weight trainers also)
Echocardiogram	Impaired diastolic function
Semen analysis	Decreased sperm count and motility; abnormal morphology

ALT—alanine aminotransferase; AST—aspartate aminotransferase; CK—creatine kinase; FSH—follicle-stimulating hormone; GGT—gamma-glutamyltransferase; HDL-C—high-density lipoprotein cholesterol; LDH—lactate dehydrogenase; LDL-C—low-density lipoprotein cholesterol; LH—luteinizing hormone; RBC—red blood cell.

if not excessively, on their physical attributes, compared with other substance abusers who may disregard their physical attributes and sometimes appear unkempt as drugs increasingly dominate their lives. For some users, physical attributes are a way of defining themselves, deriving self-esteem, and competing successfully in a world perceived as populated with winners and losers. Other users suffer from a form of body dysmorphic disorder, labeled muscle dysmorphia [65••], in which obsessively focusing on muscular appearance becomes an organizing force that, in psychodynamic terms, deflects conscious attention away from other psychosocial problems and underlying conflicts. Recent studies suggest that selective serotonin reuptake inhibitor (SSRI) antidepressants have efficacy in treating body dysmorphic disorder [66], as well as for the depression following discontinuation of AAS [55•].

Second, when abstinence from AAS is initiated, users respond to their perceived and real losses of physical attributes with negative mood states. Anabolic-androgenic steroids can facilitate gains in muscle size and strength that are not necessarily achievable by so-called natural methods alone. Therefore, patients consider their losses irreversible without resuming use of AAS, and they may benefit from therapy that helps them to accept and mourn the loss of both idealized and realized physical attributes. Of course, users must move forward as well as giving due attention to past losses. Patients may be viewed as undergoing a life-cycle transition in which old values and activities that emphasized physical attributes are replaced with newly fulfilling and a balanced array of alternatives that will vary with each individual.

Third, AAS users often embrace prevailing cultural values of physical fitness, success, victory, and appearing attractive. Although people may debate how attractive one becomes after using AAS, there is no doubt that AAS users strive to accomplish something with drugs other than simply getting high or escaping from generally shared cultural values. Rather, their goals of winning competitions and achieving a particular physical appearance require the hard work ordinarily associated with delayed gratification. Indeed, AAS are not immediately euphorigenic and reinforcing in ways that cocaine, heroin, and alcohol are.

For conceptual purposes, treatment may be divided into the following three (admittedly artificial) phases: a post-assessment phase, a withdrawal phase, and a post-withdrawal phase.

Post-assessment phase

The goals of this phase are to treat AAS-associated consequences that require immediate attention and to motivate the patient for treatment of abuse or dependence. Immediate treatment with antipsychotic medication, for example, may be required for marked states of agitation, aggression, and mania. In terms of motivation, AAS users may present for treatment reluctantly as do other patients with substance use disorders. The need of AAS users to see themselves as big and strong may contribute to their denial about having a drug problem. Motivational interviewing techniques may be applied to treatment-averse AAS users [67]. For example, providing feedback regarding laboratory abnormalities and other physical findings is a helpful technique to motivate AAS users who already have strong concerns about their bodies. Involving family and friends in the assessment and motivation of patients for treatment is also useful.

Withdrawal phase

Withdrawal symptoms, discussed previously, are typically depressive in nature. Supportive psychotherapy during withdrawal is essential and consists of reassurance, education, and directive guidance or coaching. Patients are

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reassured when they perceive those who treat them as nonjudgmental of their use, understanding of their motivations, and knowledgeable about the effects of AAS. Patients should be educated about the symptoms and course of AAS withdrawal so they may knowingly anticipate what will happen. Whether by trait or drug-induced state, AAS users can be competitive and aggressive, which may confer advantages in some settings, but not in the therapeutic relationship. The therapist who assumes a position like a coach or teammate—that is, someone on the same side as the patient—may effectively diffuse these challenges to treatment.

Pharmacotherapy is viewed as adjunctive to psychotherapy during AAS withdrawal [48]. Endocrine pharmacotherapy is targeted at the syndrome of hypogonadotropic hypogonadism that results from chronic, high-dose administration of AAS. In the absence of any controlled clinical trials, endocrine pharmacotherapy is reserved for persistently severe symptoms that 1) do not respond to supportive psychotherapy, and 2) jeopardize the goal of initiating abstinence because patients find them intolerable [55•]. Endocrine pharmacotherapy is only recommended in consultation with an endocrinologist, especially when considering the treatment of women and children who abuse AAS.

The goals of endocrine therapy are to restore functioning of the hypothalamic-pituitary-gonadal (HPG) axis, and to alleviate associated symptoms such as sterility and fatigue. Tests of endocrine function (Table 5) should be performed both before and during treatment. Endocrine pharmacotherapies for hypogonadotropic hypogonadism include the testosterone esters, human chorionic gonadotropin, antiestrogens, and synthetic forms of luteinizing hormone-releasing hormone [48,55•]. Sample regimens are detailed elsewhere and will not be reviewed here [48,55•].

Depressive symptoms are common during AAS withdrawal, and the use of antidepressants is indicated when symptoms persist and meet criteria for major depression. Serotonin selective reuptake inhibitors are preferred, because of successful case reports (reviewed elsewhere [55•]) and a recent study suggesting that AAS alter serotonergic functioning [43••]. Serotonin selective reuptake inhibitors also have a low potential for overdose, adverse cardiac effects, and anticholinergic side effects, all of which must be considered when treating AAS users who are already at risk for suicide, cardiotoxicity, and prostatic hypertrophy. Antipsychotic drugs may be necessary for treating marked irritability, aggressiveness, or agitation that persists into the withdrawal phase. Although previous reviews by the author suggested a potential role for using clonidine to treat opioid-like withdrawal signs and symptoms [48,55], the lack of evidence that opioid-like withdrawal occurs with AAS dependence precludes any such recommendation [50].

Post-withdrawal phase

Following the immediate withdrawal period, treatment should focus on factors that may increase the risk for relapse including comorbid psychiatric disorders such as major depression and muscle dysmorphia [65••]. Antidepressant treatment that was started during the withdrawal phase should be monitored for effectiveness and any necessary adjustments. If antidepressants were previously withheld to assess the possibility of remission with abstinence and psychotherapy alone, then patients should be reevaluated for medication during this phase if clinically significant depressive symptoms remain present. Antidepressants should also be considered to treat muscle dysmorphia [66]. Antipsychotic medication can usually be tapered and discontinued during this phase unless a persisting comorbid disorder (*eg*, bipolar disorder) requires it.

When motivation to maintain abstinence is high enough and a therapeutic alliance is established, psychotherapy may proceed. Internal and external triggers for resuming AAS use should be identified, and new thoughts and behaviors acquired to counter such triggers and provide alternatives to using AAS. Examples of internal triggers include thinking one is not big enough, feeling inadequate in social situations or during workouts, and perceiving one's body as too small. External triggers include the people, places, and things that were associated with using AAS such as working out in the same gym where AAS were purchased.

Conclusions

This literature review provides no evidence that AAS abuse or dependence develops with the therapeutic use of AAS. Therefore, AAS should not be withheld for legitimate medical indications. However, at least 165 instances of AAS dependence have been reported among weightlifters and bodybuilders who took supraphysiologic doses and engaged in intensive weight training activity. Nonmedical users sometimes take AAS despite adverse endocrine, cardiac, hepatic, and psychiatric consequences and, thus, meet DSM-IV criteria for abuse.

A new model of AAS dependence is proposed consisting of two stages to account for both the muscle-active and psychoactive effects of AAS. In Stage 1, high-dose AAS are used for their muscle-active effects in conjunction with strict dietary and intensive weight training regimens. At this stage, a diagnosis of DSM-IV dependence at this stage is greatly confounded by the compulsive quality of weight training and the reinforcing value of achieving large muscle size and increased strength [10,42]. In Stage 2, it is hypothesized that chronic, high-dose administration of AAS activates brain-mediated reward systems. No cases of AAS dependence in the absence of weight training and muscle-active effects have been described. Thus, Stage 2 users are a subset of Stage 1 users. Latter stage users may meet DSM-IV criteria for dependence and require

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professional treatment for addiction, especially in the presence of coexisting substance use disorders.

The history, physical, and laboratory examinations are used to identify new cases of AAS users and to assess for adverse consequences of use and dependence. The mental status examination is a key part of the assessment because multiple reports of suicide and homicide have been associated with nonmedical AAS use. Treatment for withdrawal symptoms involves supportive psychotherapy and sometimes medications. Psychosocial therapy, although similar in some respects to treatment of other substance use disorders, must also address the over-reliance on physical attributes for identity and self-esteem.

References and Recommended Reading

Papers of particular interest, published recently, have been highlighted as:

- • Of importance
- •• Of major importance

1. Conway AJ, Handelsman DJ, Lording DW, *et al.*: **Use, misuse and abuse of androgens. The Endocrine Society of Australia consensus guidelines for androgen prescribing.** *Med J Aust* 2000, **172**:220–224.
2. Shahidi NT: **A review of the chemistry, biological action, and clinical applications of anabolic-androgenic steroids.** *Clin Ther* 2001, **23**:1355–1390.
3. Basaria S, Wahlstrom JT, Dobs AS: **Clinical review 138: Anabolic-androgenic steroid therapy in the treatment of chronic diseases.** *J Clin Endocrinol Metab* 2001, **86**:5108–5017.
4. Polsky B, Kotler D, Steinhart C: **HIV-associated wasting in the HAART era: guidelines for assessment, diagnosis, and treatment.** *AIDS Patient Care STDS* 2001, **15**:411–423.
5. Langer CJ, Hoffman JP, Ottery FD: **Clinical significance of weight loss in cancer patients: rationale for the use of anabolic agents in the treatment of cancer-related cachexia.** *Nutrition* 2001, **17(suppl)**:S1-S20.
6. Morton R, Gleason O, Yates W: **Psychiatric effects of anabolic steroids after burn injuries.** *Psychosomatics* 2000, **41**:66–68.
7. Hart DW, Wolf SE, Ramzy PI, *et al.*: **Anabolic effects of oxandrolone after severe burn.** *Ann Surg* 2001, **233**:556–564.
8. Ferreira I, Brooks D, Lacasse Y, Goldstein R: **Nutritional intervention in COPD: a systematic overview.** *Chest* 2001, **119**:353–363.
9. Morley JE: **Testosterone replacement in older men and women.** *J Gend Specif Med* 2001, **4**:49–53.
10. Midgley SJ, Heather N, Davies JB: **Dependence-producing potential of anabolic-androgenic steroids.** *Addict Res* 1999, **7**:539–550.
11.• Brower KJ: **Anabolic steroids: potential for physical and psychological dependence.** In *Anabolic Steroids in Sport and Exercise*, edn 2. Edited by Yesalis CE. Champaign: Human Kinetics; 2000:280–304.

A detailed and comprehensive review of the literature on AAS dependence, including evidence, course, predictors, and mechanisms.

12. Copeland J, Peters R, Dillon P: **Anabolic-androgenic steroid use disorders among a sample of Australian competitive and recreational users.** *Drug Alcohol Depend* 2000, **60**:91–96.
13. Midgley SJ, Heather N, Best D, *et al.*: **Risk behaviors for HIV and hepatitis infection among anabolic-androgenic steroid users.** *AIDS Care* 2000, **12**:163–170.
14. Gruber AJ, Pope HG Jr: **Psychiatric and medical effects of anabolic-androgenic steroid use in women.** *Psychother Psychosom* 2000, **69**:19–26.
15. O'Sullivan AJ, Kennedy MC, Casey JH, *et al.*: **Anabolic-androgenic steroids: medical assessment of present, past and potential users.** *Med J Aust* 2000, **173**:323–327.
16. Nilsson S, Baigi A, Marklund B, Fridlund B: **Trends in the misuse of androgenic anabolic steroids among boys 16–17 years old in a primary health care area in Sweden.** *Scand J Prim Health Care* 2001, **19**:181–182.
17. Irving LM, Wall M, Neumark-Sztainer D, Story M: **Steroid use among adolescents: findings from Project EAT.** *J Adolesc Health* 2002, **30**:243–252.
18. Wichstrom L, Pedersen W: **Use of anabolic-androgenic steroids in adolescence: winning, looking good or being bad?** *J Stud Alcohol* 2001, **62**:5–13.
19. Kindlundh AM, Hagekull B, Isacson DG, Nyberg F: **Adolescent use of anabolic-androgenic steroids and relations to self-reports of social, personality and health aspects.** *Eur J Public Health* 2001, **11**:322–328.
20. Johansson P, Lindqvist A, Nyberg F, Fahlke C: **Anabolic androgenic steroids affects alcohol intake, defensive behaviors and brain opioid peptides in the rat.** *Pharmacol Biochem Behav* 2000, **67**:271–279.
21. Arvary D, Pope HG Jr: **Anabolic-androgenic steroids as a gateway to opioid dependence.** *N Engl J Med* 2000, **342**:1532.
22.• Thiblin I, Lindquist O, Rajs J: **Cause and manner of death among users of anabolic androgenic steroids.** *J Forensic Sci* 2000, **45**:16–23.

This article well documents the influence of psychiatric factors on premature mortality in AAS users. Suicide, homicide, reckless driving, and mixed drug abuse accounted for all 34 cases described.

23. Clark AS, Lindenfeld RC, Gibbons CH: **Anabolic-androgenic steroids and brain reward.** *Pharmacol Biochem Behav* 1996, **53**:741–745.
24. Manoharan G, Campbell NP, O'Brien CJ: **Syncopal episodes in a young amateur body builder.** *Br J Sports Med* 2002, **36**:67–68.
25. Long SF, Wilson MC, Davis WM: **The effects of nandrolone decanoate on cocaine-induced kindling in male rats.** *Neuropharmacology* 2000, **39**:2442–2447.
26. Phillis BD, Irvine RJ, Kennedy JA: **Combined cardiac effects of cocaine and the anabolic steroid, nandrolone, in the rat.** *Eur J Pharmacol* 2000, **398**:263–272.
27.• Kutscher EC, Lund BC, Perry PJ: **Anabolic steroids: a review for the clinician.** *Sports Med* 2002, **32**:285–296.

An up to-date overview of the topic for practicing physicians.

28.•• Yesalis CE: *Anabolic Steroids in Sport and Exercise*, edn 2. Champaign: Human Kinetics; 2000.

An excellent compilation of well-referenced chapters that cover the full spectrum of AAS-related topics including history, epidemiology, effects on performance, medical and psychiatric consequences, drug testing, prevention, assessment and treatment, and legal aspects. Another chapter is devoted to the use and effects of AAS in women.

29. Pope HG Jr, Brower KJ: **Anabolic-androgenic steroid abuse.** In *Comprehensive Textbook of Psychiatry*, edn 7. Edited by Sadock BJ, Sadock VA. Philadelphia: Lippincott Williams & Wilkins; 2000:1085–1095.
30.• Parssinen M, Seppala T: **Steroid use and long-term health risks in former athletes.** *Sports Med* 2002, **32**:83–94.

Details information that is useful for informing and counseling potential and current users of AAS.

31. Torres-Calleja J, Gonzalez-Unzaga M, DeCelis-Carrillo R, *et al.*: **Effect of androgenic anabolic steroids on sperm quality and serum hormone levels in adult male bodybuilders.** *Life Sci* 2001, **68**:1769–1774.
32. Babigian A, Silverman RT: **Management of gynecomastia due to use of anabolic steroids in bodybuilders.** *Plast Reconstr Surg* 2001, **107**:240–242.
33. Zaugg M, Jamali NZ, Lucchinetti E, *et al.*: **Anabolic-androgenic steroids induce apoptotic cell death in adult rat ventricular myocytes.** *J Cell Physiol* 2001, **187**:90–95.
34. Haupt HA: **Upper extremity injuries associated with strength training.** *Clin Sports Med* 2001, **20**:481–490.

Case 4:22-cv-00325-RH-MAF Document 178-39 Filed 04/27/23 Page 10 of 11

35. Parssinen M, Kujala U, Vartiainen E, *et al.*: **Increased premature mortality of competitive powerlifters suspected to have used anabolic agents.** *Int J Sports Med* 2000, **21**:225–227.
36. Bahrke MS: **Psychological effects of endogenous testosterone and anabolic-androgenic steroids.** In *Anabolic Steroids in Sport and Exercise,* edn 2. Edited by Yesalis CE. Champaign: Human Kinetics; 2000:247–278.
37.• Pope HG Jr, Kouri EM, Hudson JI: **Effects of supraphysiologic doses of testosterone on mood and aggression in normal men: a randomized controlled trial.** *Arch Gen Psychiatry* 2000, **57**:133–140.
One of few controlled studies investigating the psychiatric effects of high-dose AAS. The authors go on to estimate the prevalence of mania and hypomania among AAS users, and argue why their estimate is the lower limit.
38. Midgley SJ, Heather N, Davies JB: **Levels of aggression among a group of anabolic-androgenic steroid users.** *Med Sci Law* 2001, **41**:309–314.
39. Rabkin JG, Wagner GJ, Rabkin R: **A double-blind, placebo-controlled trial of testosterone therapy for HIV-positive men with hypogonadal symptoms.** *Arch Gen Psychiatry* 2000, **57**:141–147.
40. Yates WR: **Testosterone in psychiatry: risks and benefits.** *Arch Gen Psychiatry* 2000, **57**:155–156.
41. Dean CE: **Prasterone (DHEA) and mania.** *Ann Pharmacother* 2000, **34**:1419–1422.
42. Bahrke MS, Yesalis CE: **Weight training: a potential confounding factor in examining the psychological and behavioral effects of anabolic-androgenic steroids.** *Sports Med* 1994, **18**:309–318.
43.•• Daly RC, Su TP, Schmidt PJ, *et al.*: **Cerebrospinal fluid and behavioral changes after methyltestosterone administration: preliminary findings.** *Arch Gen Psychiatry* 2001, **58**:172–177.
One of the first studies to make a correlation between AAS-induced neurochemical effects and behavioral changes in humans.
44. Aitken C, Delalande C, Stanton K: **Pumping iron, risking infection? Exposure to hepatitis C, hepatitis B and HIV among anabolic-androgenic steroid injectors in Victoria, Australia.** *Drug Alcohol Depend* 2002, **65**:303–308.
45. Hallberg M, Johansson P, Kindlundh AM, Nyberg F: **Anabolic-androgenic steroids affect the content of substance P and substance P(1–7) in the rat brain.** *Peptides* 2000, **21**:845–852.
46. Harrison RJ, Connor DF, Nowak C, *et al.*: **Chronic anabolic-androgenic steroid treatment during adolescence increases anterior hypothalamic vasopressin and aggression in intact hamsters.** *Psychoneuroendocrinology* 2000, **25**:317–338.
47. Schlussman SD, Zhou Y, Johansson P, *et al.*: **Effects of the androgenic anabolic steroid, nandrolone decanoate, on adrenocorticotropin hormone, corticosterone and proopiomelanocortin, corticotropin releasing factor (CRF) and CRF receptor1 mRNA levels in the hypothalamus, pituitary and amygdala of the rat.** *Neurosci Lett* 2000, **284**:190–194.
48. Brower KJ: **Withdrawal from anabolic steroids.** *Curr Ther Endocrinol Metab* 1997, **6**:338–343.
49. Tennant F, Black DL, Voy RO: **Anabolic steroid dependence with opioid-type features.** *N Engl J Med* 1988, **319**:578.
50. Negus SS, Pope HG Jr, Kanayama G, *et al.*: **Lack of evidence for opioid tolerance or dependence in rhesus monkeys following high-dose anabolic-androgenic steroid administration.** *Psychoneuroendocrinology* 2001, **26**:789–796.
51. Johansson P, Hallberg M, Kindlundh A, Nyberg F: **The effect on opioid peptides in the rat brain, after chronic treatment with the anabolic androgenic steroid, nandrolone decanoate.** *Brain Res Bull* 2000, **51**:413–418.
52. Harlan RE, Brown HE, Lynch CS, *et al.*: **Androgenic-anabolic steroids blunt morphine-induced c-fos expression in the rat striatum: possible role of beta-endorphin.** *Brain Res* 2000, **853**:99–104.
53. Yesalis CE, Bahrke MS: **Doping among adolescent athletes.** *Baillieres Best Pract Res Clin Endocrinol Metab* 2000, **14**:25–35.
54. Fingerhood MI, Sullivan JT, Testa M, Jasinski DR: **Abuse liability of testosterone.** *J Psychopharmacol* 1997, **11**:59–63.
55.• Brower KJ: **Assessment and treatment of anabolic steroid abuse, dependence, and withdrawal.** In *Anabolic Steroids in Sport and Exercise,* edn 2. Edited by Yesalis CE. Champaign: Human Kinetics; 2000:305–332.
This book chapter contains the authors' most comprehensive review of clinical assessment and treatment issues, and served as the guide to relevant sections of the current article.
56. Arnedo MT, Salvador A, Martinez-Sanchis S, Gonzalez-Bono E: **Rewarding properties of testosterone in intact male mice: a pilot study.** *Pharmacol Biochem Behav* 2000, **65**:327–332.
57. Johnson LR, Wood RI: **Oral testosterone self-administration in male hamsters.** *Neuroendocrinology* 2001, **73**:285–292.
58. Rosellini RA, Svare BB, Rhodes ME, Frye CA: **The testosterone metabolite and neurosteroid 3alpha-androstanediol may mediate the effects of testosterone on conditioned place preference.** *Brain Res Brain Res Rev* 2001, **37**:162–171.
59. Frye CA, Park D, Tanaka M, *et al.*: **The testosterone metabolite and neurosteroid 3alpha-androstanediol may mediate the effects of testosterone on conditioned place preference.** *Psychoneuroendocrinology* 2001, **26**:731–750.
60. Kindlundh AM, Lindblom J, Bergstrom L, *et al.*: **The anabolic-androgenic steroid nandrolone decanoate affects the density of dopamine receptors in the male rat brain.** *Eur J Neurosci* 2001, **13**:291–296.
61. Johansson P, Ray A, Zhou Q, Huang W, *et al.*: **Anabolic androgenic steroids increase beta-endorphin levels in the ventral tegmental area in the male rat brain.** *Neurosci Res* 1997, **27**:185–189.
62. Brower KJ, Blow FC, Hill EM: **Risk factors for anabolic-androgenic steroid use in men.** *J Psychiatr Res* 1994, **28**:369–380.
63. Pertusi R, Dickerman RD, McConathy WJ: **Evaluation of aminotransferase elevations in a bodybuilder using anabolic steroids: hepatitis or rhabdomyolysis?** *J Am Osteopath Assoc* 2001, **101**:391–394.
64. Braseth NR, Allison EJ Jr, Gough JE: **Exertional rhabdomyolysis in a body builder abusing anabolic androgenic steroids.** *Eur J Emerg Med* 2001, **8**:155–157.
65.•• Olivardia R, Pope HG Jr, Hudson JI: **Muscle dysmorphia in male weightlifters: a case-control study.** *Am J Psychiatry* 2000, **157**:1291–1296.
This article from the authors who coined the term, "muscle dysmorphia," examines a variant of body dysmorphic disorder characterized by preoccupation with the perception that one's musculature is too small. Previously labeled "reverse anorexia nervosa" by the same investigators, muscle dysmorphia may possibly underlie many cases of Stage I dependence on AAS.
66. Phillips KA, Albertini RS, Rasmussen SA: **A randomized placebo-controlled trial of fluoxetine in body dysmorphic disorder.** *Arch Gen Psychiatry* 2002, **59**:381–388.
67. Brower KJ, Rootenberg JH: **Counseling for substance abuse problems.** In *Counseling in Sports Medicine.* Edited by Ray R, Wiese-Bjornstal D. Champaign: Human Kinetics; 1999:179–204.
68. Ahrendt DM: **Ergogenic aids: counseling the athlete.** *Am Fam Physician* 2001, **63**:913–922.
69. Kanayama G, Gruber AJ, Pope HG Jr, *et al.*: **Over-the-counter drug use in gymnasiums: an underrecognized substance abuse problem?** *Psychother Psychosom* 2001, **70**:137–140.
70. Stephens MB, Olsen C: **Ergogenic supplements and health risk behaviors.** *J Fam Pract* 2001, **50**:696–699.
71. Brower KJ, Blow FC, Beresford TP, Fuelling C: **Anabolic-androgenic steroid dependence.** *J Clin Psychiatry* 1989, **50**:31–33.
72. Brower KJ, Eliopulos GA, Blow FC, *et al.*: **Evidence for physical and psychological dependence on anabolic androgenic steroids in eight weight lifters.** *Am J Psychiatry* 1990, **147**:510–512.
73. Hays LR, Littleton S, Stillner V: **Anabolic steroid dependence.** *Am J Psychiatry* 1990, **147**:122.
74. Copeland J, Peters R, Dillon P: **Anabolic-androgenic steroid dependence in a woman.** *Aust N Z J Psychiatry* 1998, **32**:589.

PLAINTIFFS006501

75. Brower KJ, Blow FC, Young JP, Hill EM: **Symptoms and correlates of anabolic-androgenic steroid dependence.** *Br J Addict* 1991, **86**:759–768.
76. Gridley DW, Hanrahan SJ: **Anabolic-androgenic steroid use among male gymnasium participants: dependence, knowledge, and motives.** *Sport Health* 1994, **12**:11–14.
77. Pope HG Jr, Katz DL: **Psychiatric and medical effects of anabolic-androgenic steroid use: a controlled study of 160 athletes.** *Arch Gen Psychiatry* 1994, **51**:375–382.
78. Malone DA Jr, Dimeff RJ, Lombardo JA, Sample RH: **Psychiatric effects and psychoactive substance use in anabolic- androgenic steroid users.** *Clin J Sport Med* 1995, **5**:25–31.
79. Clancy GP, Yates WR: **Anabolic steroid use among substance abusers in treatment.** *J Clin Psychiatry* 1992, **53**:97–100.

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ORIGINAL ARTICLE

Reconstructive

Transgender and Gender-nonbinary Patient Satisfaction after Transmasculine Chest Surgery

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Background: Transmasculine chest surgery is the most common surgery performed in transmasculine patients, with high overall acceptance and low postoperative complication rates. Trends have shown clear improvement in quality of life and satisfaction. However, to the best of our knowledge, overall patient satisfaction after transmasculine chest surgery and associated factors are largely unknown. The aim of this study is to estimate the overall patient satisfaction in transgender men and nonbinary population after transmasculine chest surgery and to assess associated factors.

Methods: A systematic review was conducted by searching literature in several databases. Meta-analyses of prevalence with a random-effect model for overall and subgroup prevalence were performed. Meta-regression, publication bias, and sensitivity analyses were conducted.

Results: A total of 1052 transmasculine patients underwent any type of transmasculine chest surgery. The pooled overall postoperative satisfaction was 92% [95% confidence interval (CI) 88–96%]. In the subgroup metanalysis, patient satisfaction after periareolar mastectomy was 93% (CI 88%–97%) and after mastectomy with or without free nipple grafting was 90% (CI 84%–95%). Patient satisfaction for studies with mean follow-up >1 year was 91% (CI 83%–97%) and for mean follow-up of 1 year or less was 93% (CI 89%–96%).

Conclusions: This study shows a high level of satisfaction in transmasculine chest surgery for both techniques, which remain stable over time. Also, our results show that this procedure impacts patient satisfaction beyond chest appearance and surgical outcomes. This corroborates its broad acceptance and the improvements in the standard of care, and decision-making approach. *(Plast Reconstr Surg Glob Open 2021;9:e3479; doi: 10.1097/GOX.0000000000003479; Published online 19 March 2021.)*

INTRODUCTION

Transmasculine chest surgery, also known as chest masculinization surgery or transmasculine top surgery, is usually the first, arguably the most important, and a common surgical intervention among transgender patients.[1–3] The goal of this surgery is the creation of an aesthetically pleasing male chest that aligns better with transmasculine patients' gender identity to easily acquire their male gender role in society. The objectives are to remove breast tissue and excessive skin, reduce and, if necessary, reposition the nipple-areola complex, eliminate the inframammary fold, and minimize scarring.[4]

In the 2015 US transgender survey, 97% of transmasculine individuals mentioned that they either have had or may someday want to have a transmasculine chest surgery.[5] Several surgical techniques for transmasculine chest surgery have been described, and attempts to define indications for each type of surgery have translated into different algorithms based upon skin redundancy or elasticity, breast volume, skin envelope, grade of breast ptosis, or a combination of these characteristics.[1,2,4,6–9] Despite

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these algorithms, the final decision is usually made after a thorough surgeon–patient discussion, considering patient safety, interests, and goals, and surgeon's experience.

Transmasculine chest surgery plays an important role in gender affirmation care. These surgeries are well-known, efficient, and safe with high acceptance among patients.[2,10,11] Similarly, they confer patients with a better quality of life by improving their chest dysphoria.[12–15] Despite the apparent perception of high satisfaction among patients that undergo transmasculine chest surgery, to the best of our knowledge, a meta-analysis of prevalence of the overall satisfaction as the main outcome in patients who undergo this procedure has not been reported. Hence, the aim of this study was to estimate the overall satisfaction after transmasculine chest surgery in transmasculine and gender non-binary patients (TGNB), using a metanalysis of prevalence and identify factors impacting satisfaction.

METHODS

Search Methodology

This systematic review and meta-analysis followed the Preferred Reporting Items for Systematic Reviews and Meta-analysis statement.[16] A comprehensive research of several databases from each database's inception was conducted on June 15, 2020.[16] The databases used were PubMed, Embase, Scopus, Web of Science, Cochrane Database of Systematic Reviews, and Author Supplied. The research strategy was designed and conducted with the help of a librarian. Controlled vocabulary with keywords was conducted to search for studies of transmasculine chest surgeries in transgender and nonbinary population. (**See Supplemental Digital Content 1**, which displays the search strategy. http://links.lww.com/PRSGO/B596.)

Study Selection

A 2-stage screening was conducted for study selection through Covidence.[17] Two researchers (VPB and SSB) conducted the first and second screening process by reviewing titles and abstracts, and full texts from screened abstracts, respectively. If there were discordances in the screening, a third reviewer (OJM) moderated a discussion and, after that discussion among the 3 reviewers, a final decision was made. Inclusion criteria were all articles that included participants 18 years or more who underwent transmasculine chest surgery and reported level of satisfaction, and observational or interventional studies in English or Spanish. Exclusion criteria were letter to editors, preliminary papers, social media observations, case series involving <10 patients, case reports correspondences, and animal studies.

Data Extraction and Synthesis

We identified the authors, year of publication, country of origin, number of participants in each study, and their mean age and follow-up periods from surgery to the day of assessment of satisfaction, type of surgical technique, and type of assessment tool used for postoperative satisfaction.

We considered "patient satisfaction" as any tool that assessed overall patient-reported outcomes of breast, nipple, chest, and/or aesthetic satisfaction. If there was more than 1 reported domain or type of surgery, we calculated the weighted average. Additionally, we identified the number of participants in each study (if mentioned) who responded to be satisfied ("very satisfied," "satisfied," or "agree" to be satisfied with surgical results or reported "excellent" or "very good" surgical results).

Quality Assessment

The National Institute of Health (NIH) quality assessment tool was used to assess the risk of bias among the selected studies.[18] According to this tool, the articles were classified as "good," "fair," or "poor," and we categorized each article into "low risk," "moderate risk," or "high risk" of bias, respectively.

Outcomes

Our primary outcome was the overall patient satisfaction among TGNB population who underwent any type of transmasculine chest surgery. Our secondary outcome was to discriminate the difference in estimation of satisfaction based on the type of surgical technique [periareolar mastectomies and inframammary skin resection with or without free nipple graft (FNG)] and follow-up time (1-year or more versus <1-year follow-up).

Statistical Analysis

Given that several studies do not specify necessary information to calculate the standard error of the mean, we decided to transform these data into proportions based on the criteria mentioned above. With these data, we conducted a meta-analysis of proportions based on the number of patients who reported to be satisfied with the results of their breast/chest area and/or nipples. The data were analyzed, and the pooled overall satisfaction was estimated using meta-analysis with Stata Software/IC (version 16.1).[19] Due to the high variability among studies, a logistic-normal random effect model was conducted. The 95% exact confidence intervals (CIs) for study-specific proportions and 95% Wald CI for the overall pooled estimates with Freeman-Tukey double arcsine transformation were used.[19,20] The effect size and percentage of weight from each individual study was presented. Also, a subgroup meta-analysis was conducted for follow-up time and type of surgical procedure.

I^2 statistics was used to assess heterogeneity across studies. High heterogeneity was considered if $I^2 > 50\%$. $P < 0.05$ was considered statistically significant. Also, univariable meta-regression was conducted to assess significance in year of publication, tools of measurement, and risk of bias.

To assess publication bias, funnel plot and the Egger test were performed. If this test showed no statistical significance ($P > 0.05$), we assumed that the publication bias had a low impact on the results from this study. We used the trim-and-fill method to assess the impact of the missing studies.

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Sensitivity analysis was conducted to assess the magnitude and impact of covariates to our overall pooled estimation of patient satisfaction. We excluded high-risk bias studies and studies with <20 participants.

RESULTS

Included Studies

A total of 296 articles from the search strategy and studies from additional sources were identified. The first screening process yielded 34 articles, and the second screening generated 22 articles, which were included in the systematic review. A total of 14 studies were used for meta-analysis. In Figure 1, the Preferred Reporting Items for Systematic Reviews and Meta-analysis flow diagram is presented.

Quality Assessment

With the NIH Quality Assessment tool, almost all studies were ranked "good" and "fair." (**See Supplemental Digital Content 2**, which shows the ranking from each individual study. http://links.lww.com/PRSGO/B597.)

Study Characteristics

A total of 1052 transmasculine individuals and 16 nonbinary individuals underwent transmasculine chest

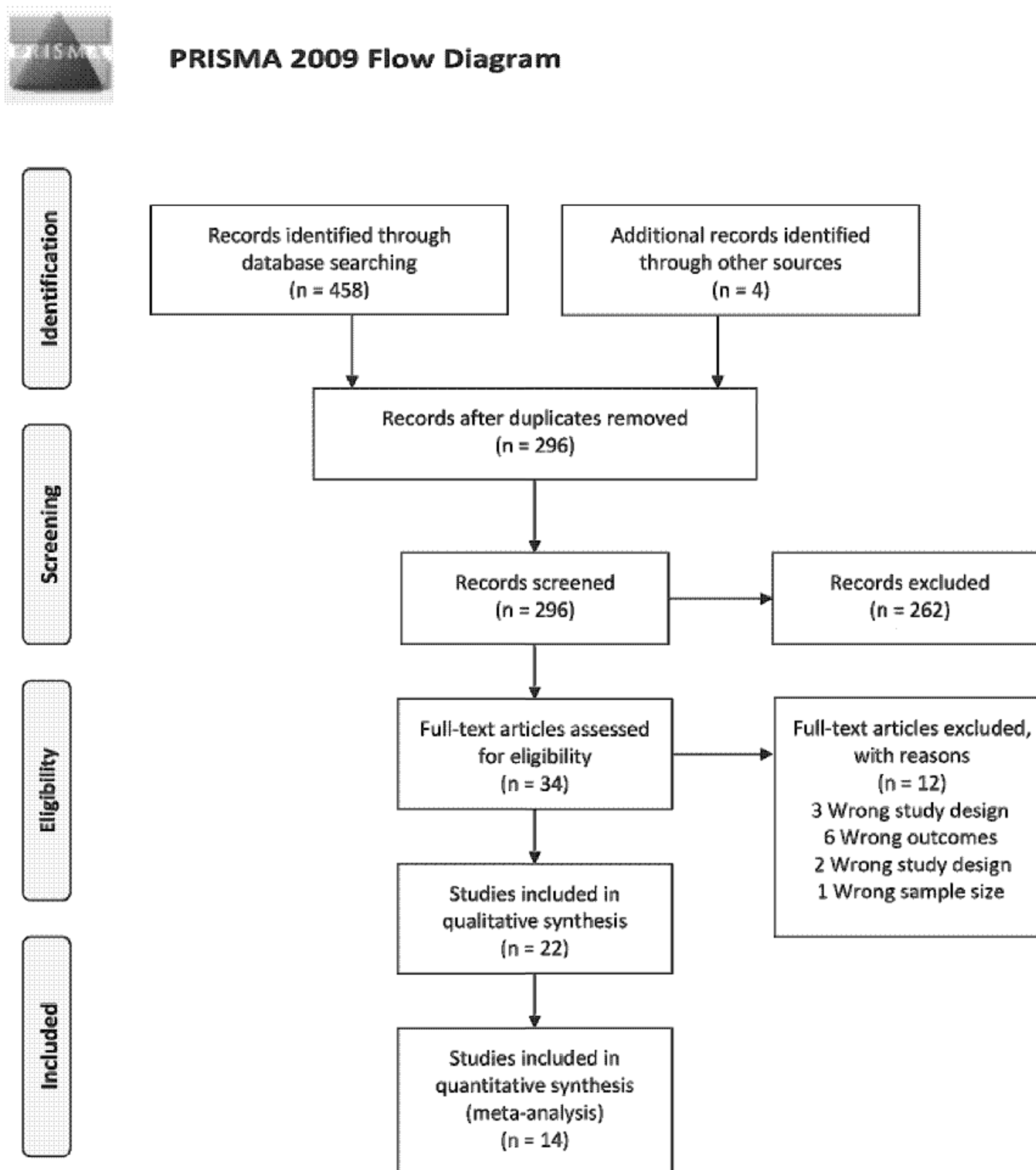

Fig. 1. Preferred Reporting Items for Systematic Reviews and Meta-analysis flow diagram.

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surgery. The age ranged from 17.2 to 37.8 years. Only 4 studies used standardized questionnaires to assess patient satisfaction.[12–14,21] (Table 1).

A total of 296 (38.3%) patients underwent any type of periareolar mastectomy: 140 (18.1%) were semicircular periareolar mastectomy, 129 (16.7%) were concentric circular periareolar mastectomy, 25 (3.2%) were extended concentric periareolar, 2 (0.3%) were transareolar. A total of 475 (61.4%) patients underwent inframammary skin resection mastectomy with or without FNG: 344 (44.5%) underwent mastectomy with FNG, 121 (15.7%) underwent inferior pedicle mammaplasty, 10 (1.3%) mastectomies that do not specify if the patients had FNG. A total of 2 (0.3%) underwent liposuction only (Table 2).

Satisfaction Assessment Tools

In Table 1, overall satisfaction and assessment tools from each study are shown. There is a high level of overall satisfaction. The majority of the studies that used a Likert scale of 5-point, all of them reported levels of satisfaction >3.9, and 4 studies reported overall satisfaction >4.50.[1,6,22–28]

From all the surgical techniques, semicircular periareolar mastectomy was the most satisfactory compared with other techniques (Table 2).[8,13,22,24–26,29] Liposuction alone had the lowest overall satisfaction (2.2); however, only 1 study used this technique.[25]

Pooled Overall Patient Satisfaction

The pooled overall patient satisfaction from the studies included in the meta-analysis was 92% (95% CI 88%–96%, I^2 = 65.6%) (Fig. 2).[6,8,14,22–24,26–33] The majority of TGNB patients underwent mastectomy with FNG.

Subgroup Analysis

In a subgroup meta-analysis, patient satisfaction after periareolar mastectomy was 93% (CI 88%–97%, I^2 = 00.0%), and after mastectomy with or without FNG was 90% (CI 84%–95%, I^2 = 35.1%) (Fig. 3). In subgroup meta-analysis for follow-up time, patient satisfaction for studies with mean follow-ups <1-year was 91% (CI 83%–97%, I^2 = 26.1%), and for mean follow-ups of 1-year or less was 93% (CI 89%–96%, I^2 = 4 5.2%) (Fig. 4).

Meta–regression and Publication Bias

From the covariates analyzed, none affected the pooled endpoint in this meta-analysis. When assessing publication bias, the funnel plot showed asymmetry between the

Table 1. Study Characteristics

Author, Year	Country	No. Patients	Mean Age, y (SD, Range)	Follow-up, Mo (Range)	Satisfaction Assessment Tool	Overall Satisfaction	Risk of Bias
Agarwal et al, 2018	USA	42	27.7 (18–50)	6	BREAST-Q	85%	L
Bustos et al, 2020	USA	34	Md 27 DIFNG/ Md 24 DINS	DIFNG: 13 (12–13) DINS: 11.5 (9–15)	BODY-Q	76.6%	L
Frederick et al, 2017	USA	57	Md 24 (15–71)	1 wk, 3 wk, 3 mo and 12 mo	5-point scale survey	4.77	L
Berry et al, 2012	UK	100	Md 28 (18–55)	6 wk, 6 mo	5-point scale survey	3.98	L
Top et al, 2017	Turkey	52	28.2 (18–47)	28 (12–56)	5-point scale survey	4.44	M
Van De Grift et al, 2016	Netherlands	33	26.1 (18–59)	10.0 (6–16)	BIS*	2.66	L
Wolter et al, 2018	Germany	170	27.4 (18–52)	14 d, 3 mo, 12 mo	4-point scale survey†	1.42	L
Marinkovic et al, 2017	USA	14	17.2 (13.4–19.7)	19.2 (1.2–43.2)	5-point scale survey	4.9	M
Wolter et al 2015	Germany	158	28.6 (16–54)	14 d, 3 mo, 12 mo	4-point scale survey†	1.64†	L
Monstrey et al, 2008	Belgium	28	NS	NS	5-point scale survey	4.14	L
Morselli et al, 2019	Italy	68	33 (21–55)	NS	5-point scale survey	4.57	M
Nelson et al, 2009	London	12	31 (20–45)	32 (8–60)	Questionnaire	• Very satisfied (8) • Satisfied (3) • Unsatisfied (1)	L
Esmonde et al, 2018	Portland	33	29.5 (SD 7.60)	1.97 (SD 1.22) (0.17–6.2)	Ad hoc questionnaire	4.88 (QoL)	H
Poudrier et al, 2019	USA	**45**	33 (18–58)‡	(3 to >72)	Survey questions (Generated from the BREAST-Q)	• Agree 98% • Neutral 2% • Disagree 0%	M
Rahmati et al, 2020	Iran	20	NS	12	Questionnaire	• Very satisfied (15) • Satisfied (4) • Unsatisfied (1)	H
Van De Grift et al, 2017	Netherlands	26	25.8 (18–59)	12	10-point scale survey	7	L
Van De Grift et al, 2018	Netherlands	49	26.4 (SD 7.7)	26 (6–68)	BODY-Q	64.6%	L
Van De Grift et al, 2018(2)	Netherlands, Belgium, and Germany	49	36.3§	NS	5-point scale survey	NS	M
De Cuypere et al, 2005	Belgium	14	37.8 (SD 8.9)	45.6 (SD 2.7)	5-point scale survey	4.14	M
Rothenberg et al, 2018	USA	14¶	Me 28 (21–49)	1 wk	NS	NA	M
Lorusso, 2017	Italy	16	31 (22–41)	3, 6, and 12 mo	4-point scale survey	3.81	M
Ayyala, 2020	USA	18	29 (19–49)	6 (3–32)	5-point scale survey	4.47	L

*5-point scale = (1) very satisfied to (5) very dissatisfied.

†4-point scale = (1) very satisfied, (2) satisfied, (3) less satisfied, (4) no satisfied.

‡13 more subjects were nonbinary; mean age include both populations.

§Includes both transmasculine and transfeminine participants.

¶Three participants were nonbinary; the mean included both populations.

BIS, Body Image Scale for Transsexuals; DIFNG, double-incision mastectomy with free nipple grafting; DINS, double-incision mastectomy with nipple sharing technique; Md: median; NA: Not applicable; NS, not specified.

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Table 2. Patient Satisfaction by Type of Mastectomy

Type of Mastectomy	Author, Year	No. Surgeries Performed per Patient (per Breast)	Patient Satisfaction*
Semicircular periareolar mastectomy	Top et al, 2017	17 (34)	4.64
	Wolter et al, 2018	36 (72)	1.39
	Marinkovic et al, 2017	4 (8)	4.9
	Wolter et al, 2015	22 (44)	1.54
	Monstrey et al, 2008	6 (12)	4.5
	Van De Grift et al, 2018	6 (12)	66
	Frederick et al, 2017	40 (80)	4.78
	Berry et al, 2012	9 (18)	3.45
Transareolar mastectomy	Monstrey et al, 2008	2 (4)	4.0
Concentric circular periareolar mastectomy	Wolter et al, 2018	26 (52)	1.46
	Top et al, 2017	7 (14)	4.42
	Wolter et al, 2015	29 (58)	1.65
	Monstrey et al, 2008	6 (12)	4.5
	Rahmati et al, 2020	20 (40)	Very satisfied (15) Satisfied (4) Unsatisfied (1)
	Van De Grift et al, 2017	14 (28)	7.0
	Van De Grift et al, 2018	27 (54)	65.5
Extended concentric periareolar mastectomy	Monstrey et al, 2008	9 (18)	3.6
	Berry et al, 2012	4 (8)	4.5
	Top et al, 2017	12 (24)	4.58
Mastectomy with or without FNG	Marinkovic et al, 2017	10 (20)	4.9
Mastectomy with FNG	Bustos et al, 2020	34 (68)	76.6
	Ayyala, 2020	18 (36)	4.77
	Frederick et al, 2016	48 (96)	4.76
	Berry et al, 2012	85 (170)	4.01
	Wolter et al, 2018	84 (168)	1.37
	Wolter et al, 2015	26 (52)	1.65
	Monstrey et al, 2008	5 (10)	4.3
	Lorusso, 2017	16 (32)	3.81
	Van De Grift et al, 2018	16 (32)	62.5
	Van De Grift et al, 2017	12 (24)	7.0
Inferior pedicle mammaplasty	Wolter et al, 2018	24 (48)	1.58
	Wolter et al, 2015	81 (162)	1.65
	Top et al, 2017	16 (32)	4.13
Liposuction only	Berry et al, 2012	2 (4)	2.2

*Refer to Table 1 to evaluate satisfaction's assessment tool.FNG, Free nipple grafts.

studies (Fig. 5). An Egger test suggested low statistical significance in publication bias (p-value = 0.8047). The Trim & Fill method imputed 22 additional studies, which had an irrelevant impact on the adjusted result. It had a change of effect size from 0.907 to 0.925, with no change in the statistical significance.

Sensitivity Analysis

The overall patient satisfaction was not significantly changed by the excluded studies. The overall satisfaction was 92% (CI 86%–96%, $I^2 = 77.7\%$), which is equal to that calculated with the inclusion of such studies (92%, CI 88%–96%, $I^2 = 65.6\%$).

DISCUSSION

Transmasculine chest surgery positively impacts TGNB patients by targeting and reducing chest dysphoria. These surgeries help achieve a better alignment between secondary sexual characteristics and gender identity. It is well known that mastectomy is the first and most acceptable gender affirmation surgeries among transmasculine patients.[1] Consequently, there have been many studies in the surgical and medical literature evaluating different levels of satisfaction among this population. However, to the best of our knowledge, this is the first systematic review and meta-analysis that generates an estimation of the overall patient satisfaction among TGNB patients after transmasculine top surgery and identifies associated factors. In this study, the pooled patient's satisfaction was 92% (CI 88%–96%), which corroborates that patients are highly satisfied with transmasculine chest surgery.

Validated Assessment Tools

In 2017, Borene et al reported a systematic review of patient-reported outcome tools following gender affirmation surgeries.[34,35] The authors argued that a complete assessment instrument must have functional, psychorelational, and cosmetic survey questions and should follow the rules of the US Food and Drug Administration and the Scientific Advisory Committee of the Medical Outcome Trusts.[34,35] Among all studies, the only validated tool was the BREAST-Q, described by Pusic et al.[34–36] Not surprisingly, the authors concluded that there is a lack of validated tools to assess patient satisfaction in this patient population. Similarly, most studies in our systematic review did not count with a validated tool to assess satisfaction in TGNB patients. This leads to an enormous subjectivity of the variable of interest. Additionally, this reflects the need of awareness among researchers and surgeons to use existent validated tools or create new ones to achieve more reliable data.

The vast majority used a Likert-type scale survey, an ordinal psychometric measurement of attitudes.[37] In this

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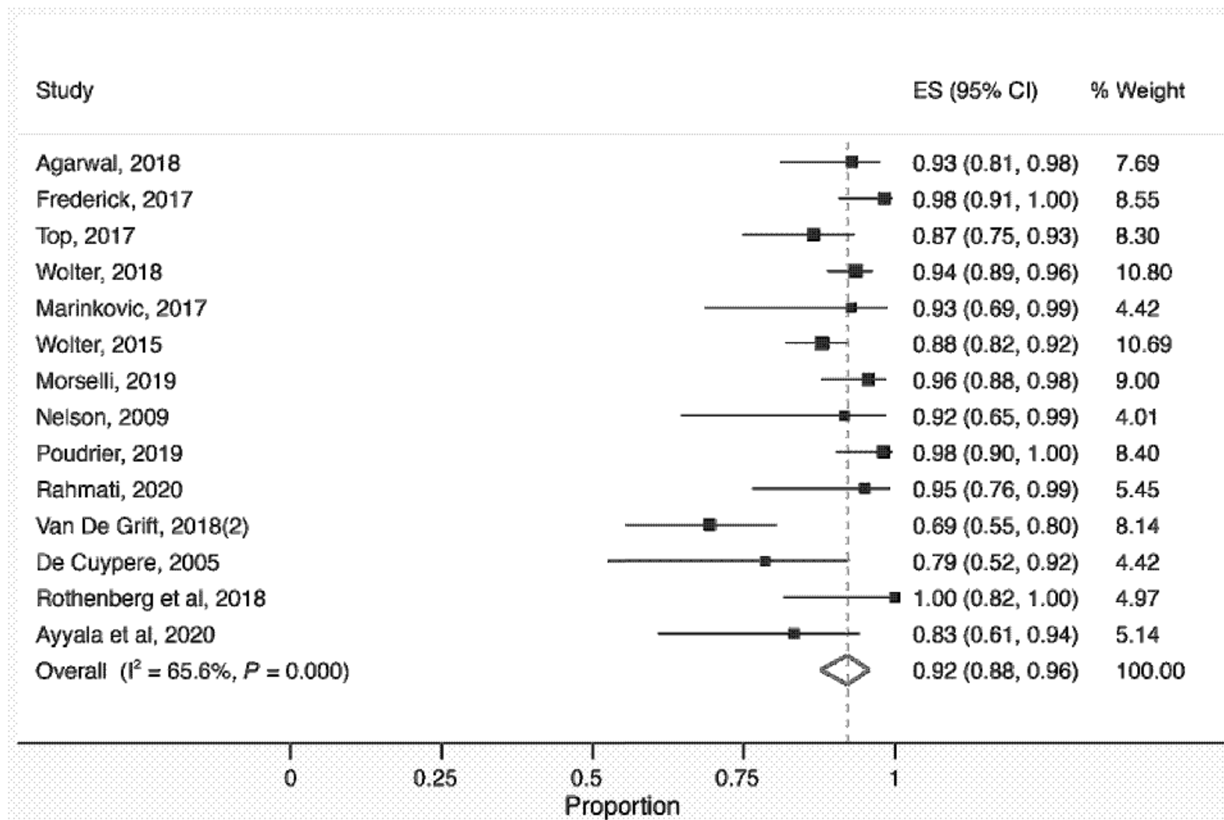

Fig. 2. Pooled overall patient satisfaction of TGNB population who underwent transmasculine chest surgeries. Heterogeneity χ^2 = 37.78 (d.f. = 13), P = 0.00, I^2 (variation in ES attributable to heterogeneity) = 65.59%, estimate of between-study variance τ^2 = 0.04, test of effective size (ES) = 0, z = 33.92, P = 0.00.

type of scale, the concept relies on indicating the degree of agreement or disagreement for a specific statement.[37] Major advantages of this scale are its universal acceptance and use, easy interpretation and understanding, and inexpensiveness.[38] Similarly, it may be a quantifiable scale, which confers the possibility to compute mathematical analyses. However, it is a uni-dimensional scale, where the space between categories cannot be assessed, conveying uncertainty in the distance between each point. In addition, it fails to measure true attitudes of respondents, and more importantly, participants can be influenced by previous questions or avoid the use of extreme options. Given these drawbacks, the reliability and validity of such scales remain uncertain. This and the fact that many studies did not include values or data necessary to calculate effect sizes and/or standard error for inclusion in a meta-analysis of a continuous outcome, we decided to use the proportion of patients who reported to be "satisfied"," very satisfied," or "agree to be satisfied" in our meta-analysis of prevalence.

Follow-up time

Several studies had a mean follow-up time of <1 year. Assessment of satisfaction with a relatively short follow-up time may not represent a realistic picture of the long-term status. This 1-year period after surgery is usually called the "honeymoon period."[23] Studies with a mean follow-up time >1 year showed an overall satisfaction of 91% (CI 83%–97%), which is less compared with the overall satisfaction with mean follow–up time of 1 year or less [93% (CI 89%–96%)]. However, we believe this slight difference is attributed to the small number of studies (5) that had more than 1-year follow-up, rather than due to a true difference between both groups. Moreover, this difference was not statistically significant.

In this respect, Poudrier et al, in 2019, conducted a study to evaluate a linear association between surgical timing and surgical satisfaction.[31] The authors found no difference regarding follow-up time and surgical satisfaction. In fact, they found clinical and statistical significance in patients' bodily satisfaction, psychosocial well-being, and sexual satisfaction following mastectomy in all follow-up times (3 months, late 6 months, and 1 year follow-up after surgery).[31] However, this study did not use a validated assessment tool.[31] In conclusion, the high level of satisfaction appears to remain stable over time. However, more studies should be focused on the long-term follow-up assessment of satisfaction in this population to have robust evidence of the extent of this positive perception.

Surgical Technique

Some studies assessed differences in satisfaction between types of mastectomy. The pooled patient satisfaction for periareolar mastectomy was 93% (CI 88%–97%),

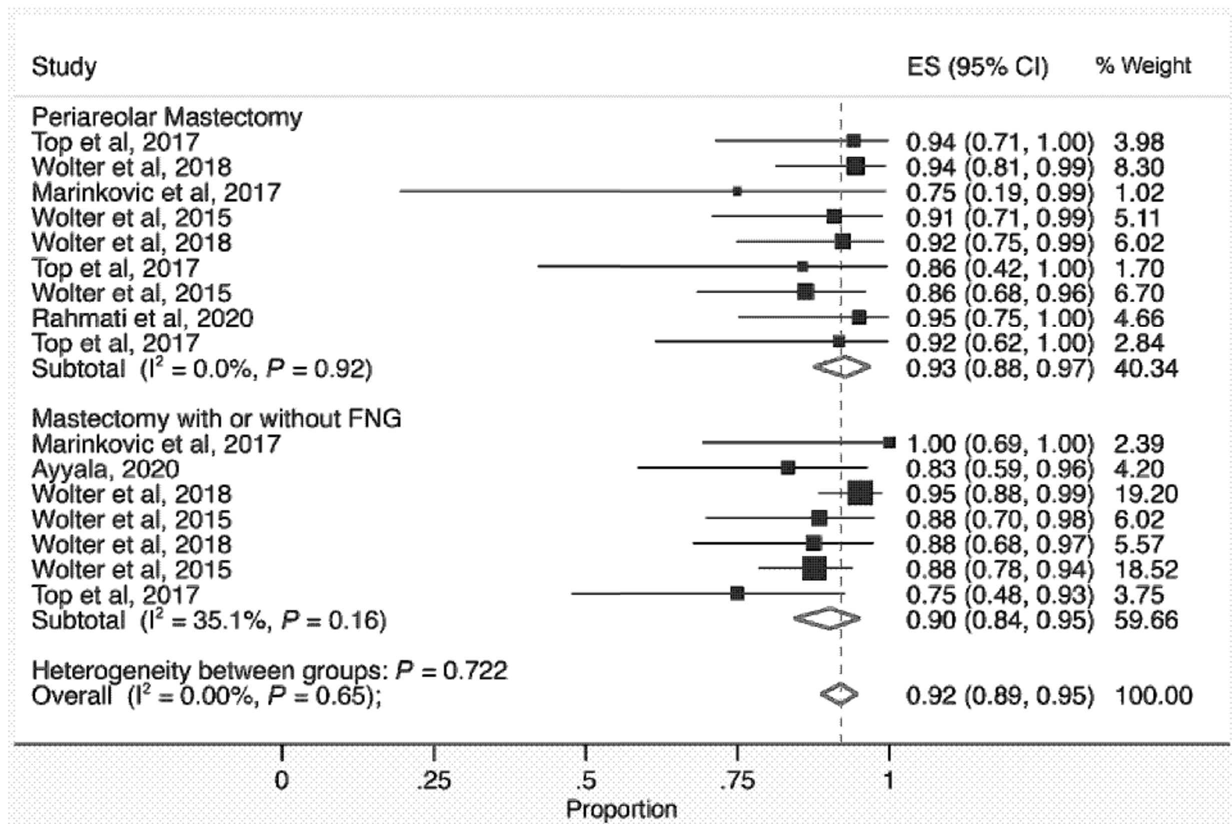

Fig. 3. Subgroup pooled patient satisfaction by type of mastectomy in TGNB population after transmasculine chest surgeries. I^2, variation in effect size (ES) attributable to heterogeneity.

and the overall satisfaction for subcutaneous mastectomy with or without FNG was 90% (CI 94%–95%). With this information, we can conclude that both surgical techniques have high satisfaction levels, and their difference is minimal.

In fact, Frederick et al, in 2017, demonstrated no statistical significance in mean satisfaction between mastectomy with FNG and nipple-sparing mastectomy.[24] In this study, the major concerns among satisfied patients were nipple appearance, scar, and contour irregularities.[24] Interestingly, despite algorithmic approaches, many patients requested nipple-sparing mastectomy, mainly because of the relatively short and inconspicuous scar.[24] Monstrey et al and Berry et al found high rates of satisfaction in concentric circular group and primary extended periareolar mastectomy techniques.[1,25] These results are expected because nipple-sparing techniques are surgical procedures that remove breast tissue through a small incision around the nipple, with significantly reduced scarring.

On the other hand, Van De Grift et al, in 2016, studied 2 mastectomy techniques (concentric circular and inframammary fold and FNG) pre and postoperatively, and found that both mastectomies statistically improved satisfaction with the chest and hips, and in social and hair growth items.[39] Marinkovic et al reported high satisfaction with both surgical techniques.[22] Also, Bustos et al, in 2020, presented a novel technique for nipple reconstruction, named nipple split sharing, which has been shown to yield superior aesthetic outcomes, particularly for the nipple-areola complex masculine aspect, size, contour, scarring, and position compared with the traditional FNG technique.[21] These results demonstrated that these surgeries positively impact patient satisfaction in a level that goes beyond the chest appearance.

Factors Associated with Satisfaction

We identified several factors associated with the level of satisfaction among patients who underwent mastectomies. Bustos et al found that the total average aesthetic outcomes were superior with the nipple split sharing technique for patients who undergo double incision mastectomy.[21] They argued that, with this technique, nipple-areola complexes had a more masculine aspect, adequate size and contour, and less scarring.[21] Frederick et al suggested that the most important factors for "satisfied" patients were nipple appearance, scar, and contour irregularities.[24] Van De Grift et al found that the strongest positive correlation of satisfaction was chest shape and symmetry.[4] Additionally, these surgeries were found to positively impact patient's lives, self-confidence, and social interactions.[22] Likewise, they have been reported to improve quality of life, sexual confidence, psychosocial functioning, and decrease burden of depression.[22,31,27]

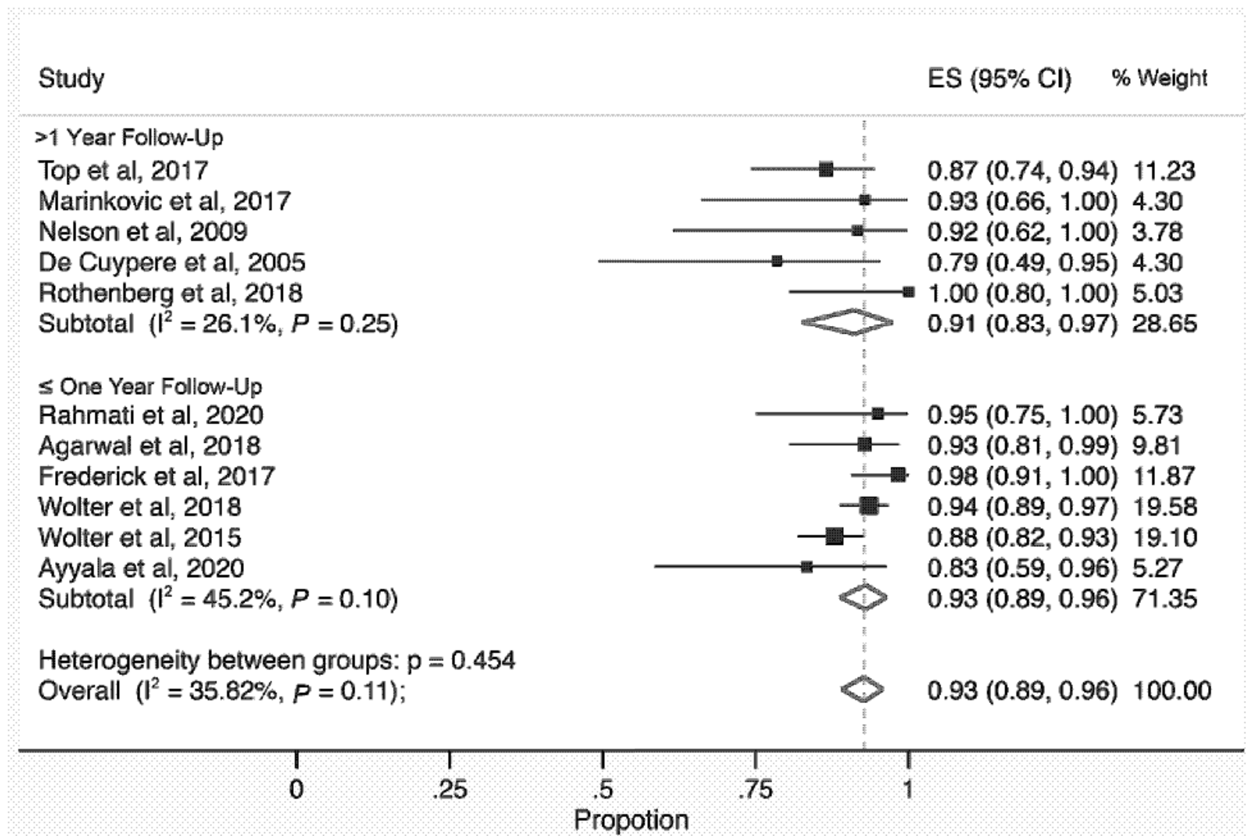

Fig. 4. Subgroup pooled patient satisfaction by follow-up time in TGNB population after transmasculine chest surgeries. I^2, variation in effect size (ES) attributable to heterogeneity.

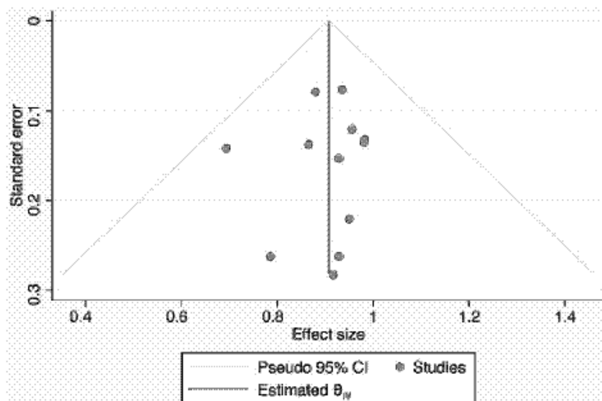

Fig. 5. Funnel plot.

On the other hand, Frederick et al identified that the major concern for "very unsatisfied" patient was scarring and contour irregularities.[24] Surgical complications have also been linked with dissatisfaction among this population. Monstrey et al considered moving to FNG techniques despite the generation of scar, and found a low rate of complications (5.4%) and revision surgeries (11.1%) with a good satisfaction rate (4.3 over 5).[1]

Hence, a well-performed surgical procedure with good surgical outcomes is indispensable in terms of satisfaction. According to Van De Grift et al, surgical decision-making should be based not only on physical examination alone, but also on technical and self-reported outcomes.[4] We believe that our study provides important information to the surgical literature regarding not just the overall prevalence of satisfaction, but also a review of major factors associated with satisfaction, which are indispensable for surgical-decision making.

Considering the limitations of validation and subjectivity of the variable "satisfaction," our study corroborates the improvements in patient care, algorithms and surgical techniques toward transmasculine chest surgeries. However, in plastic surgery, the necessity of a comprehensive, longitudinal, and validated tool is fundamental to allow surgeons to compare techniques, quantify positive effects, and identify benefits of certain procedures, ultimately improving patient care.[34,35] Therefore, it is vital for future studies to assess level of satisfaction using a comprehensive, validated instruments, like "TRANS"-Questionnaire,[40] a recently validated pre and postoperative satisfaction tool in patients undergoing gender affirmation surgery mastectomies, to acquire more robust and reliable data. We encourage researchers to conduct studies in which satisfaction assessment is the primary outcome, to increase the power of the study, and consequently its validity. Additionally, future studies should be made to assess the level of satisfaction discriminating by

type of surgical technique. These considerations will give studies more external validity and impact.

CONCLUSIONS

This study shows a high level of satisfaction in transmasculine chest surgery for both techniques, which remain stable over time. Also, our results show that transmasculine chest surgery positively impacts patient's satisfaction beyond chest appearance and surgical outcomes. This reflects and corroborates its broad acceptance and improvement in the standard of care, surgical technique, and decision-making approach.

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REFERENCES

1. Monstrey S, Selvaggi G, Ceulemans P, et al. Chest-wall contouring surgery in female-to-male transsexuals: a new algorithm. *Plast Reconstr Surg.* 2008;121:849–859.
2. Claes KEY, D'Arpa S, Monstrey SJ. Chest surgery for transgender and gender nonconforming individuals. *Clin Plast Surg.* 2018;45:369–380.
3. Coleman E, Bockting W, Botzer M, et al. *Standards of Care for the Health of Transsexual, Transgender, and Gender-Nonconforming People.* www.wpath.org. Accessed May 13, 2020.
4. Van De Grift TC, Elfering L, Bouman MB, et al. Surgical indications and outcomes of mastectomy in transmen: a prospective study of technical and self-reported measures. *Plast Reconstr Surg.* 2017;140:415E–424E.
5. James SE, Herman JL, Rankin S, Keisling M, Mottet L, Anafi M. *The Report of the 2015 U.S. Transgender Survey.* Washington, D.C.: *National Center for Transgender Equality,* 2016.
6. Morselli PG, Summo V, Pinto V, et al. Chest wall masculinization in female-to-male transsexuals: our treatment algorithm and life satisfaction questionnaire. *Ann Plast Surg.* 2019;83:629–635.
7. Hage JJ, Bloem JJ. Chest wall contouring for female-to-male transsexuals: amsterdam experience. *Ann Plast Surg.* 1995;34:59–66.
8. Wolter A, Diedrichson J, Scholz T, et al. Sexual reassignment surgery in female-to-male transsexuals: an algorithm for subcutaneous mastectomy. *J Plast Reconstr Aesthet Surg.* 2015;68:184–191.
9. Bjerrome Ahlin H, Kölby L, Elander A, et al. Improved results after implementation of the Ghent algorithm for subcutaneous mastectomy in female-to-male transsexuals. *J Plast Surg Hand Surg.* 2014;48:362–367.
10. Cuccolo NG, Kang CO, Boskey ER, et al. Masculinizing chest reconstruction in transgender and nonbinary individuals: an analysis of epidemiology, surgical technique, and postoperative outcomes. *Aesthetic Plast Surg.* 2019;43:1575–1585.
11. Cohen WA, Shah NR, Iwanicki M, et al. Female-to-male transgender chest contouring: a systematic review of outcomes and knowledge gaps. *Ann Plast Surg.* 2019;83:589–593.
12. van de Grift TC, Kreukels BPC, Elfering L, et al. Body image in transmen: multidimensional measurement and the effects of mastectomy. *J Sex Med.* 2016;13:1778–1786.
13. Van De Grift TC, Elfering L, Greijdanus M, et al. Subcutaneous mastectomy improves satisfaction with body and psychosocial function in trans men: findings of a cross-sectional study using the body-Q chest module. *Plast Reconstr Surg.* 2018;142:1125–1132.
14. Agarwal CA, Scheefer MF, Wright LN, et al. Quality of life improvement after chest wall masculinization in female-to-male transgender patients: a prospective study using the BREAST-Q and body uneasiness test. *J Plast Reconstr Aesthet Surg.* 2018;71:651–657.
15. Kühn S, Keval S, Sader R, et al. Mastectomy in female-to-male transgender patients: a single-center 24-year retrospective analysis. *Arch Plast Surg.* 2019;46:433–440.
16. Liberati A, Altman DG, Tetzlaff J, et al. The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *Plos Med.* 2009;6:e1000100.
17. Covidence. Better systematic review management. https://www.covidence.org/home. Accessed May 28, 2020.
18. National Heart, Lung, and Blood Institute (NHLBI). Study quality assessment tools. https://www.nhlbi.nih.gov/health-topics/study-quality-assessment-tools. Accessed May 25, 2020.
19. Nyaga VN, Arbyn M, Aerts M. Metaprop: a Stata command to perform meta-analysis of binomial data. *Arch Public Health.* 2014;72:39.
20. Freeman MF, Tukey JW. Transformations related to the angular and the square root. *Ann Math Stat.* 1950;21:607–611.
21. Bustos SS, Forte AJ, Ciudad P, et al. The nipple split sharing vs. conventional nipple graft technique in chest wall masculinization surgery: can we improve patient satisfaction and aesthetic outcomes? *Aesthetic Plast Surg.* 2020;44:1–9.
22. Marinkovic M, Newfield RS. Chest reconstructive surgeries in transmasculine youth: experience from one pediatric center. *Int J Transgenderism.* 2017;18:376–381.
23. De Cuypere G, T'Sjoen G, Beerten R, et al. Sexual and physical health after sex reassignment surgery. *Arch Sex Behav.* 2005;34:679–690.
24. Frederick MJ, Berhanu AE, Bartlett R. Chest surgery in female to male transgender individuals. *Ann Plast Surg.* 2017;78:249–253.
25. Berry MG, Curtis R, Davies D. Female-to-male transgender chest reconstruction: a large consecutive, single-surgeon experience. *J Plast Reconstr Aesthet Surg.* 2012;65:711–719.
26. Top H, Balta S. Transsexual mastectomy: selection of appropriate technique according to breast characteristics. *Balkan Med J.* 2017;34:147–155.
27. van de Grift TC, Elaut E, Cerwenka SC, et al. Surgical satisfaction, quality of life, and their association after gender-affirming surgery: a follow-up study. *J Sex Marital Ther.* 2018;44:138–148.
28. Ayyala HS, Mukherjee TJ, Le TM, et al. A three-step technique for optimal nipple position in transgender chest masculinization. *Aesthet Surg J.* 2020;40:NP619–NP625.
29. Wolter A, Scholz T, Pluto N, et al. Subcutaneous mastectomy in female-to-male transsexuals: optimizing perioperative and operative management in 8 years clinical experience. *J Plast Reconstr Aesthet Surg.* 2018;71:344–352.
30. Nelson L, Whallett EJ, McGregor JC. Transgender patient satisfaction following reduction mammaplasty. *J Plast Reconstr Aesthet Surg.* 2009;62:331–334.
31. Poudrier G, Nolan IT, Cook TE, et al. Assessing quality of life and patient-reported satisfaction with masculinizing top surgery: a mixed-methods descriptive survey study. *Plast Reconstr Surg.* 2019;143:272–279.

PLAINTIFFS006524

32. Rahmati EO, Mohammadi NM. Evaluation of concentric periareolar subcutaneous mastectomy outcomes in transsexual patients during 2016–2017 in Iran: a clinical study. *Turkish J Plast Surg.* 2020;28:25.
33. Rothenberg KA, Tong WMY, Yokoo KM. Early experiences with the buttonhole modification of the double-incision technique for gender-affirming mastectomies. *Ann Plast Surg.* 2018;81: 642–645.
34. Barone M, Cogliandro A, Di Stefano N, et al. A systematic review of patient-reported outcome measures following transsexual surgery. *Aesthetic Plast Surg.* 2017;41:700–713.
35. Andréasson M, Georgas K, Elander A, et al. Patient-reported outcome measures used in gender confirmation surgery: a systematic review. *Plast Reconstr Surg.* 2018;141:1026–1039.
36. Pusic AL, Klassen AF, Scott AM, et al. Development of a new patient-reported outcome measure for breast surgery: the BREAST-Q. *Plast Reconstr Surg.* 2009;124:345–353.
37. Rensis L. A technique for the measurement of attitudes. *Arch Psychol.* 1932;140:1–55.
38. Hartley J. Some thoughts on Likert-type scales. *Int J Clin Heal Psychol.* 2014;14:83–86.
39. van de Grift TC, Cohen-Kettenis PT, Steensma TD, et al. Body satisfaction and physical appearance in gender dysphoria. *Arch Sex Behav.* 2016;45:575–585.
40. Wanta J, Gatherwright J, Knackstedt R, et al. "TRANS"-questionnaire (TRANS-Q): a novel, validated pre- and post-operative satisfaction tool in 145 patients undergoing gender confirming mastectomies. *Eur J Plast Surg.* 2019;42:527–530.

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