

# Sexual identity and sexual orientation in children with traumatized or ambiguous genitalia.

by Milton Diamond

Despite older theories to the contrary (Diamond, 1996a, b; Zucker, 1996), an individual is born with prenatal biases with which he or she will interact with the world. In the current article I describe the lives of three unique individuals to support a model for how these prenatal biases mesh with environmental influences to mold one's sexual identity and sexual orientation. A broad outline had been proposed (Diamond, 1979). I now go further, however. On the basis of this analysis, new recommendations are offered for dealing with cases of potential sex reassignment.

The three cases presented offer insight to the development of sexual identity and orientation. Case 1 has been discussed elsewhere and will only briefly be described here. It involves an XY individual who had his penis accidentally burned by ablation and was then raised as a girl (Diamond, 1982, 1993, 1994; Diamond & Sigmundson, 1997; Money, 1975; Money & Ehrhardt, 1972; Money & Tucker, 1975). Cases 2 and 3 are hermaphroditic 46, XX individuals. They have not previously been discussed in the scientific literature. These presentations are the result of my lengthy personal interviews over repeated sessions. Singular and unique personalities, these cases are, nevertheless, believed to illustrate typical developmental strategies of psychosexual development.

The strategy reflected in the model holds that all individuals consciously or unconsciously compare themselves with others while growing up. People, unless otherwise restrained or coerced, then drift toward identifying with those with whom they feel an affiliation and feel "similar to" and drift away from identifying with those they feel "different from" or incompatible with. In this manner, even though contrary to social pressures and upbringing, those of different sexual minorities can find a niche acceptable to themselves. Allowed an abundance of choices in partners and activities, few problems are anticipated. Restrictions in partner choices or activity choices, however, are interpreted negatively. This "similar-different" theory is not new for normal development and has been proposed for gay and lesbian identity formation (Troiden, 1988). It is extended here to apply as well to all individuals regardless of sexual identity, orientation, or intersex condition. It thus

broadens the model to a universal one for psychosexual development.

The lives of these persons also call into question the standard beliefs used in sex assignment that dictated the way these individuals were raised. These beliefs are strongly enough held by pediatricians that they might be considered medical postulates: (a) Individuals are psychosexually neutral at birth; (b) healthy psychosexual development is dependent upon the appearance of one's genitals; (c) doubt should not be allowed as to sex of assignment; (d) do not change sex after two years of age (see, e.g., Behrman & Kliegman, 1994; Blethen & Weldon, 1985; Burg, Merrill, Winter, & Schaible, 1990; Diamond, 1996a, b; Diamond & Sigmundson, 1997; Kessler, 1990; Zucker, 1996). New postulates and recommendations for sex assignment or reassignment are offered to replace these.

## Case Presentations

### Case 1. A Normal Male: Penis Ablated and Raised as a Girl

John (pseudonym) is an XY individual born an identical twin in the suburb of a large metropolitan city. During a phimosis repair by cautery at eight months of age, his penis was accidentally burned beyond repair. On the advice of consultants, considering the beliefs of the time--that individuals are psychosexually neutral at birth--the child was from then on treated as a girl and, at the age of 17 months, surgically reassigned to be unambiguously raised as a female. Orchiectomy and "vulva" reconstruction were started with further surgery to wait until Joan (pseudonym) was older. All professionals associated with Joan's treatment, as did the parents and family, reinforced her feminine identity. Basically they treated Joan as a girl, preparing her for future vaginal reconstructive surgery and life as a woman. The broad history of this case has been reported (Diamond, 1982, 1993, 1994; Money, 1975; Money & Ehrhardt, 1972; Money & Tucker, 1975). Details too are available (Diamond & Sigmundson, 1997).

Despite Joan's rearing, from early on, she did not feel to be a girl, preferred association with boys, and pursued typical boys' activities and interests. Joan shunned female-typical activities and interests. Male predilections persisted until the age of 14, when Joan dramatically rebelled at living as a girl. This was despite orchiectomy and estrogen therapy, which led to breast development and rounded hips. To be forced to continue as a girl prompted Joan seriously to contemplate suicide. Without knowing her history, Joan, at age 14, revealed to her endocrinologist, from whom she had been receiving estrogens since age 12, "I suspected I was a boy since the second grade." A brief period followed, during which Joan, the clinical team involved in her management, and then her family discussed Joan's desire to live as the male she felt she was. When she switched to living as John, learning the truth of his history basically came as a welcome relief, as it essentially confirmed what he

had believed all along. He immediately and happily recast his life. John subsequently requested and received a mastectomy and then phalloplasty and without hesitation lived and was accepted as a male.

After John transitioned to living as a boy, his interest in girls was quickly evident. He rapidly sought female erotic company. Although he had overtures from boys and men while living as a girl, and afterward while living as a male, he always rejected them. John was not homophobic but definitely gynecophilic.

After John switched to living as a male, his parents developed a great deal of guilt for their participation in the original sex reassignment. They and John have, however, reconciled. At the age of 25 he married a woman several years his senior and adopted her children (Table 1).

Table 1

Sex Assignment and Self-Reassignment

Genetic

Case Sex Gonads Assignment Rearing

- 1 Joan-John XY testes Male to 17 mos. Female then female
- 2 Samantha-Sam XX ova-testes Female Female
- 3 Bill-Billie XX ova-testes Male to 13 mos. Female then female

Sexual Sexual

Case Identity Orientation Reassignment

- 1 Joan-John Male Gynecophilic By self to male at 14 yrs.
- 2 Samantha-Sam Male Androphilic By self to male Ambiphilic at 28 yrs.
- 3 Bill-Billie Female Gynecophilic None

Adult

Case Living Designation

- 1 Joan-John Male Typical male
- 2 Samantha-Sam Male True hermaphrodite
- 3 Bill-Billie Female True hermaphrodite

Case 2. A 46, XX True Hermaphrodite (Bilateral Ova-Testis) Samantha (pseudonym) was born in a midsized West Coast hospital. Pronounced a girl at birth, Samantha was raised as such. A phallic bud was noticed to grow at about the age of 5, but to the child's ardently religious mother this was not considered something to be attended to or concerned with: "Nice girls don't look at or play with themselves." To quote Samantha: "I did see my father's flaccid genitals occasionally and mine didn't look anything like his; he had a long penis and scrotum. My genitals looked more like my younger sisters' so I didn't think more about it at the time." Samantha has three younger sisters.

While growing up, Sam (Samantha's pseudonym as an adult male) recalled: "As I grew up I increasingly felt I had a boyish male drive and frame of mind

when I compared my way of thinking about things to the way I saw my girl friends and boy friends think." When she overheard some adults mentioning to her parents that her "more than tomboyish nature" probably indicated she might grow up to be a lesbian, she definitely thought that inappropriate, not because of homophobia, but because she didn't think it represented her feelings. She was definitely more interested in males as sexual partners.

Maturing into her teens, Samantha uneasily began to anticipate breast development and menstruation. Not only did these changes not occur, but she became increasingly virilized and hirsute. In an effort to understand what was happening to her, Samantha finally convinced her mother, at the age of 12, to take her to see a "specialist" rather than the pediatrician she had been seeing since birth. Sam described the experience thus: "The endocrinologist never examined me for a moment, never asked to see anything and, indeed, seemed unconcerned with my distress. He said I was a 'late bloomer and would probably start menstruating any day now.' He also told my mother: 'Tests to find out if anything was wrong would cost about \$500.00 and not be worth it.' Since this confirmed my mother's belief that I was a normal girl we went home and waited [for menarche]. But I was even more confused."

By the age of 15, Samantha was shaving. To treat this and to stimulate menstruation and breast growth, her physician, again without conducting a physical examination or discussing matters with her, prescribed a regimen of oral contraceptives. When the hormone-induced cyclic bleeding began [Samantha has a walnut-sized uterus opening to a short vagina and normal sized vestibule] her mother was elated, but Samantha disgusted. Given sanitary napkins by her mother, Samantha briefly experimented with them and then quickly threw them away in anger. Sam remembers wanting to rush outdoors to play baseball with the boys rather than deal with menstruation. He recalled: "The whole process didn't seem right for me although I couldn't say why."

Throughout adolescence, Samantha continually tried to overcompensate in dress, behaviors, and mannerisms to achieve or surpass typical standards of femininity ["self-testing"]. On the one hand, she wanted to be a perfect female but, on the other hand, she felt herself definitely unlike that ideal; she felt more masculine than feminine. At 17, Samantha entered a community beauty, talent, and scholastic achievement contest. She entered greatly relieved that there was no bathing suit competition and confident in her talent and scholastic abilities. She won and was crowned Junior Miss of her community. Sam recalls rationalizing this as an affirmation of her female outside self but also a manifestation of her competitive inner male self.

With increasing puberty, Samantha's virilization progressed with a drop in voice register and increased hirsutism. This was accompanied by feeling impelled to engage in more typical male activities with a simultaneous fear

and aversion to not being seen as a "good" female. "Gradually," Sam recalled, "I looked like a caricature of a female; it was a counterfeit image that worsened with time." Distress over her situation prompted urges for suicide, but no serious attempt was made.

Sam claimed to have masturbated, since the age of 11, by external vulva massage. Samantha's fantasies were of the good sensations without specific male or female focus. Occasionally some fluid was expelled. Sam didn't recall considering herself either male or female during these experiences, claiming instead to have been concentrating on the pleasant feelings. At 18, Samantha had her first sexual experience with another person. Samantha's male partner found the vagina she herself never previously investigated. The session was brief, and her partner did not mention anything notable. Sam recalled enjoying the reification of her female self and her ability to attract a man she found handsome but reported feeling it was actually more of what she imagined a homosexual encounter might be like.

Life continued in this dual manner until the age of 23. At this age she left home to live by herself for the first time. Working independently and still unsure of her "condition," Samantha went to get a full medical examination to deal with the male-female questions she had been nursing all these years. The evaluation covered her genetic, endocrine, and other physiological features, but the physicians never considered her psychological state. For the first time she became aware of her medical condition. Samantha was diagnosed a 46, XX true hermaphrodite with androgen-secreting polycystic ova-testes and some cellular mosaicism. The physicians also detailed her ambiguous genitalia, but again without any discussion with her of the significance of the findings or consideration of her feelings about the situation. The physicians established for Samantha a new regimen of estrogens. Without any discussion with Samantha, either they assumed she wanted to remain living as a female or didn't want to contribute to any doubts. They did not offer any advice or suggestions for further consultation or follow up. Sam claimed to have been so distressed with the diagnoses that he was not able to formulate any challenging questions at the time. Samantha left the hospital "miserable and depressed." Samantha did not think she had any options but to continue living in this limbo.

Sam recalled that although he didn't feel himself to be a woman, as his family considered him one and the physicians had not advised him he had any options, he continued to live like one. Socially, Samantha kept seeking the company of men. She reported she felt more comfortable with men than she did with women. Her experiences taught her she didn't think like any women she knew. As she said: "Having spent much time in women's company I knew how most women thought. I preferred men for both their social and their sexual companionship."

At 28, confessing her quandary to a friendly counselor, the possibility was broached of Samantha's living as a man instead of as a woman. This is how Sam, now in his late 40s, recalls what followed:

It was a concept that I had strongly felt and identified with but had never seriously entertained before.

Even though I had been camouflaging my exterior to be a feminine female to please my mother, I realized

I was more male than a mock female.

After years spent wandering in an emotional quagmire and living an agonizing lie I made the mammoth switch to becoming a man. I

did it cold turkey, almost overnight.

I just stopped taking the estrogens and let my beard grow in. I immediately gave away everything that was female. And I never looked back.

I never again put on lipstick, wig or dress in public or private. And when I got my brand new male birth certificate from the court [after prolonged legal wrangling] it was the

happiest moment of my life. Now I don't think of how to behave. My maleness just comes naturally. I feel the brotherhood with men that I never felt with females. I never felt as a feminist, I felt as a male. People sometimes used to think I was a male in drag. I hated it ... as I look back it's like I was on a scenic detour as a female and finally found the main road leading to my real life. Unlike a transsexual, I never felt as a boy in a girl's body. I just felt as a boy ... I just couldn't verbalize the feelings. My depressions, mood swings, hormonal problems, weight and metabolism fluctuations [and other problems] no longer exist.

Sam now sees himself as a bisexual male seeking another person with whom to share his life. After living as a male, he has had sexual experiences with women but prefers men, and he hasn't had sexual relations with a woman for many years. To prevent any possibility of impregnation-realistic or not--Sam had a tubal ligation. Now he takes androgens and feels the decision to live as a male was both correct and psychologically necessary (Table 1). Sam has had no subsequent cosmetic or reconstructive surgery and doesn't feel any is needed: "I would not feel more male if I had my vagina sutured shut. I value all parts of my body and this way I can more easily check for cancer or other tumors and cysts which supposedly occur more frequently in hermaphrodites.

Sure my phallus is just about the size of my thumb when erect, but it has a lot of good feeling and I wouldn't trade it for a bigger one with no feeling or for no penis at all." Sam, never having had any surgery, can get pleasure either receiving a penis in his vagina or using his phallus for intromission. He can have an orgasm centering on either site. Money (1952), Epstein, (1990), and Fausto-Sterling (1993) have cited others whose sexual practices were similar to Sam's.

Sam's mother still considers him to be female and continues, after all these years, to refer to him as "daughter" and call him by his old name. His father, after a time, has accepted the change. Living as a successful professional in a large city, Sam now devotes a good bit of his time in trying to educate others about hermaphroditism and intersexuality.

### Case 3. A 46, XX True Hermaphrodite (Bilateral Ova-Testis)

Born in a major East Coast hospital with an enlarged clitoris and apparently normal female genital and reproductive system, Bill (pseudonym) was nevertheless originally diagnosed as a male pseudohermaphrodite and assigned to be raised as an unequivocal boy. Subsequently, at age 18 months, a diagnosis of true hermaphroditism was made. A clitorectomy was performed and associated labia minora also removed. Bill was reassigned an unequivocal girl, Billie (pseudonym) (Table 1). Without Billie understanding why, she was again sent to surgery at age 8. The testicular portions of her ova-testes were then removed.

Billie, at around 10 years of age, learned from her mother that her clitoris was removed but not why nor what her clitoris was. At about that time she was also sent to see a psychiatrist, supposedly because she was "incorrigible." Without Billie knowing her history, according to the psychiatrist, she was told, "You were still thinking you were a little boy." This was determined by Billie, when as an adult she went to confront the psychiatrist in an attempt to learn her history. Nevertheless, Billie recalled the original conversation as covering reproduction but not sex, genitals, or her feelings. She did not remember any professional at any time discussing her life situation with her or inquiring as to her inner feelings or emotional well-being. Following the pediatric beliefs prevalent at the time, she was reinforced as a female with no recognition of doubt as to assignment being acceptable to the therapists or parents.

This technique apparently worked, and Billie transitioned into adolescence no longer doubting her assignment as a female. From childhood, however, Billie did feel she was different from her peers, and her peers also seemed to sense she was different. They teased her repeatedly. Billie attributed the teasing to her "being smarter and sort of alien." Billie did make friends during childhood, primarily among boys, but basically she recalled her childhood as relatively lonely and without peer interaction. This continued into puberty. Her interest

was more in electronics, construction, and pyrotechniques. Her lack of interest in feminine "things" like dolls, cooking, and dresses disturbed her parents, as they were doing their best to raise her as a girl. She thinks they were oversensitive to inappropriate dress and behavior.

Puberty with breast development and menses seemed to occur normally. During her teen years, Billie, however, did not date. She was withdrawn and socially timid. Her association with boys continued for shared interests, not for erotic involvement. She recalled having "crushes" on female teachers from about the age of 13 and has identified herself as a lesbian since about the age of 19. This evolved as an independent self-assessment, despite a homophobic environment and the absence of any visible lesbian role models. Interestingly, she considers the attraction more intellectual than erotic, "more homosexual, not masculine."

During puberty, having read about masturbation, she tried it and found her genitals were insensitive to touch. In an attempt to find out about her genital surgery and general condition, after searching through different libraries, at around 18 to 19 years of age, Billie tried visiting different physicians to find out her history and have them obtain her medical records. The first several physicians did not cooperate and actively prevented her from obtaining her records. It wasn't until several years later, at the age of 22, that she could convince a physician to obtain her old hospital records, and she learned of her true diagnosis.

The fact that she had lived the first year and a half as a boy, but this was kept secret from her, and that she had finally been diagnosed as a hermaphrodite and never told or counseled about this was psychologically traumatic. Yet, even this current physician, apparently following her interpretation of the standard postulates for sex reassignment, did nothing to answer Billie's questions nor attempt to recognize nor alleviate her distress nor allow discussion of ambiguity. Indeed, some years later, on returning to see this physician, Billie learned that following the initial visit, the physician had written a follow-up letter to the original "assignment" team, congratulating them on the outcome as she [the physician] interpreted it. Because Billie was not involved in any introspective discussion with the physician, this demonstrates how false or misleading "follow-up" data might be gathered and enter the literature.

After learning her history, Billie suffered an extended period of great emotional crisis. Some 14 years passed, during which episodes of rage, depression, stress, and suicidal ideation persisted. Billie finally came to terms with her situation. She continued to live as a woman reinforced by a female body with breasts and menstruation. Moreover, she now took pride in her differences. She found strength in identifying as an intersexed person with male and female aspects that meld in ways she felt appropriate. This

acceptance of her hermaphroditism, however, has not come easily. It required coming to grips with feelings of shame and inadequacy. It still requires living with a great deal of anger over the surgical loss of her clitoris and associated erotic sensitivity. Billie would have preferred the opportunity to participate in deciding her future as a male or female. In retrospect, she is convinced that if she had been left male and she could have been virilized with intact genitals, even a hypospadiac but erotically sensitive micropenis, that too would have worked out for her. Billie concluded she had the mental insights and capacity to think and live socially as a man or woman, but having a female body made it more convenient and appropriate to remain as reassigned. Were it possible for her to have a virilized body with intact, even intersexual genitals, Billie indicated she would live as a man. Billie and her parents are essentially disaffiliated.

Angry over loss of her genital sensitivity, Billie is adamantly against the non-consensual enforcement of either gender with accompanying genital surgery on infants. Billie is now a professional woman active in the Intersex Society of North America (ISNA).

#### General Comments

These cases are obviously quite different but do share some commonalities. Each person, to a varying degree, questioned the labels applied to him or her from an early age. Their peers also saw them as different. They were teased and otherwise made to feel they were unusual. Much of this teasing was believed to stem from the discordance the peers noticed between the way these persons appeared and the way they behaved (see, e.g., Diamond, 1982; Diamond & Sigmundson, 1997). But recognition of differences was also arising from within. This paraphrase, from John basically describes his feelings and the developing thought processes of the others:

There were little things from early  
on. I began to see how different I felt  
and was, from what I was supposed  
to be. But I didn't know what it  
meant. I thought I was a freak or  
something; an alien. I looked at myself  
and said I don't like the type of  
clothing I'm given to wear, I don't

like the types of toys I'm always  
being given, I like doing things with  
boys that my parents say girls  
shouldn't do. I'm not interested in  
the things other girls like to do. I  
like hanging around with the guys  
and climbing trees and stuff like  
that and the girls I know don't like  
any of that stuff ... There is nothing  
feminine about me.

John and Sam, each for his reasons, switched their gender (social appearance) to conform to their inner (core) sexual identity. Even though the decision to switch was long in coming, the transition, when made, occurred swiftly. John, Sam, and Billie felt relief at leaving behind what they thought was living a lie.

The parents of these respondents, as far as can be ascertained, reared their children in a manner appropriate to their assignment or reassignment as a boy or girl. They all wanted their children to appear "normal" and have as typical a childhood as possible. They all accepted the professional recommendations they were given as to assignment, surgery, and rearing and did not easily accept cross-gender behavior. Parents and clinicians had the best interest of the children in mind and, considering their limited knowledge, understanding, and emotions, thought their actions would lead to a more successful adulthood (see, e.g., Zuger, 1980).

These respondents, in many respects, not only shared significant characteristics with each other but with people in general. They all compared themselves with other boys and girls. Everyday life was a living test that provided opportunities for learning, experimenting, evaluating themselves and others, and making comparisons (Diamond, 1996 a,b,c, in press; Diamond & Sigmundson, 1997). Unlike typical children, however, they saw themselves as not fitting in. These three individuals, at quite a young age, became aware they felt different from their peers in their attitudes and behaviors.

Professional help, for Joan and Samantha, early in life and before their

transition, was generally frustrating and considered more destructive than helpful. None of these individuals, as children, were told of their history or reasons for their surgeries. (They, nevertheless, were often inspected for medical teaching purposes.) The physicians involved with them seemed insensitive to their confusion and intent on trying to reinforce the original sex assignment. Perhaps they were still adhering to the standard postulate that doubt or ambiguity in gender assignment would be devastating to psychosexual development. This philosophy was reinforced by respected psychiatric thinking of the time (e.g., Stoller, 1967, 1968).

Significantly, the cases presented previously follow a long line of similar ones scattered in the medical literature. One classic case (Dicks & Childers, 1934), which somewhat mirrors John's, is of a 46, XY individual born with hypospadias. A midwife delivered the child and pronounced it a female. This male was then brought up as a girl. At the age of 13 years and 11 months, when his voice had changed to a masculine tone, he went to see the school physician. He refused to recite in class and "was urgently demanding an immediate transformation to his proper masculine role" (p. 508). The boy reported that he first became aware that he was not a girl at the age of five. He had been seen by school and other physicians over the years, but none had mentioned anything to him. He didn't realize he had any option to change. He claimed, however, that it wasn't of great concern to him until about the age of 11. Among other things, he noted virilizing signs of puberty and recognized he was sexually attracted to girls: "In all his dreams and day dreams for the preceding two or three years he had appeared as a man or a boy, never as a girl. He claimed to have no desire whatever to remain a girl" (p. 512). On his 14th birthday, against his parents' wishes, he recast his life and after a brief period of adjustment settled into a happy life as a male. He declined any surgical repair and proceeded successfully to negotiate adolescence sufficient for the reporting clinicians to write that despite being brought up as a girl for 14 years, "his social adjustment was so phenomenal that at no time was there indicated a need for intensive psychotherapy" (p. 515). They also wrote, "The boy did not condemn his parents [for rearing him as a girl] but defended them by saying, 'Of course they didn't know it all these years.' His chief resentment was directed toward the physicians who had known of his condition but said nothing" (p. 512).

Another somewhat similar case was reported by Ghabrial and Girgis (1962). A 14-year-old normally appearing female came to their Cairo clinic asking to be examined, as she believed herself to be a male. Four years earlier she had started to notice growth of her "clitoris" and swellings in her labia. She had no menstruation or breast development. Medical examination revealed a 46, XY male with a small penis and a bifid scrotum with a small testis on each side. Despite 14 years of living as a girl, when these facts were revealed to her, "she demanded a change of her sex declaring that she was sexually attracted by [sic] girls and that she had felt the difference between herself and other

girls" (p. 250). Surgery to repair her genitals was carried out, and the patient assumed a male role. On follow-up three years later, the boy "seemed cheerful and happy and apparently well adjusted ... though socially withdrawn" (pp. 250, 257).

Most recently, Khupisco (1995) wrote of a two-year-old South African boy mutilated by marauders. The boy's genitals were removed, and he was left to die. He was found and brought to a hospital, where the surgeons reconstructed his perineum and reassigned him as a girl. By age four, the child was refusing to wear dresses or play with dolls; she refused to associate with other girls. Doctors now admit that their plan has failed and that the child will never think of herself as a girl. The mother said her

"daughter" refused to wear dresses,  
rejected dolls and demanded to  
play only with the boys ... Whenever  
the family tried to dress him  
like a girl he cried and demanded  
trousers ... We thought he would  
change after the operation but he is  
more like a boy than ever ... We  
have tried to treat him like a girl,  
but he does not want to accept it.  
He still considers himself a boy.  
Now that he is growing up, he has  
started to ask difficult questions.  
He asks me where his missing private  
parts are and says he wants to  
relieve himself like his friends. He  
wants to know why he is not like

other boys. He feels rejected and an

outsider. (p. A-1)

He will have penis reconstruction surgery when he is 18.

Reiner and Meyer-Bahlburg (1995) reported preliminary findings on four cases where 46, XY males with severe genital anomalies were reassigned as females. They found that "the male-to-female reassigned children demonstrated behaviors and attitudes markedly into the masculine pattern and included one child who declared himself a male when exogenous estrogens were to be begun." They concluded: "In spite of social pressures to the contrary, reassignment of gender at birth may not be the answer to neonates with severe genital anomalies. Prenatal hormonal effects may be more important to gender identity than previously realized" (abstract NR-102). Many other cases of individuals, for reasons similar to those listed previously, seemed satisfactorily to sex-reassign themselves after reaching puberty (e.g., Brown, 1964; Burns, Segaloff, & Carrera, 1960; Dewhurst & Gordan, 1969; Hoenig, 1985; Reiner, 1996; Zuger, 1970). Deserving consideration here are also the patients of Imperato-McGinley and her co-workers and other clinicians investigating situations of 5-alpha, 17-beta, and 3-beta hydroxysteroid dehydrogenase deficiency (see, e.g., Imperato-McGinley, Akgun, Ertel, Sayli, & Shackleton, 1987; Imperato-McGinley et al., 1991; Imperato-McGinley, Peterson, Gautier, & Sturla, 1981; Rosler & Kohn, 1983). These dozens of patients were raised as girls. Concomitant with pubertal masculinization, however, almost all switched to living as males. All these cases provide reason enough to challenge critically the role of rearing in one's sexual identity formation and the traditional sex-reassignment postulates.

## Discussion

The first set of major questions to emerge from the preceding cases is "How and why did these individuals question their sex of rearing?" "Was this related to the appearance of their genitals?" and "What does this tell us of normal psychosexual development?"

Two of the three individuals described previously, despite being reared as girls, and without normal male genitals, recognized they were malassigned and switched to life as males. This recognition is believed due to an analysis of one's inner feelings and behavior preferences in comparison with those of one's peers. In the everyday processes of growing up, all children observe and compare themselves with others (Goldman & Goldman, 1982). Although each individual might interpret and rationalize differently why he or she makes such comparisons, comparable introspection is a standard feature of development. One of the most crucial analyses everyone makes is "who am I like and who

am I unlike." Typical children see themselves as other boys and girls and easily come to accept their labels as such. They have no reason to question their identities. From an early age, preschool children distinguish among their peers and, more often than not, will increasingly associate with children of the same sex. This association is not envisioned as any more intentional or purposeful than when kittens and puppies are intermingled and then sort themselves with their own species. Because these behaviors occur so early in life and despite negative reinforcement, I see them as inherent so one doesn't have to think about them.

The behavioral differences and feelings have little to do with the appearance of these people's genitals or of the genitals of their peers. None of these individuals knew what his or her genitals were "supposed" to look like until elementary school years or later. Children in English-speaking countries certainly may be aware of genital differences but usually do not understand they are crucial for classification of gender until the age of nine (Goldman & Goldman, 1982). Clothes, hair style, and size are usually more significant as gender markers. "Among the So of Uganda, prepubertal boys and girls, although nude, do not use the genitalia as a way to distinguish boy from girl. It is more from common interests in games and activities" (Elizabeth R. Allgeier, personal communication, 20 May 1996). McConaghy (1979), found that gender permanence and the genital basis of gender are distinct aspects of gender understanding, with the genital basis of gender being comprehended latter. Goldman and Goldman (1982), in their major comparative study, found boys and girls usually enjoyed being with persons of their own gender because they preferred doing what boys and girls do recreationally or vocationally. Typical individuals feel concordance between what they come to understand is expected of them as boys or girls and how they feel comfortable behaving. This is reassuring and comforting. Only as children get older and more sophisticated do the genitals become sex markers, and by that time the person destined to be "gender" atypical has often, on the bases of preferred behaviors, already noted-or been noted for--his or her different, "freakish," or alien status. For atypical individuals, the discordance is cause for serious reflection and introspection. Such awareness is predictable, and others, too, have made note of it (e.g., Meyer-Bahlburg, 1993, for intersexed individuals and Savin-Williams, 1996, for gay, lesbian, and bisexual youth).

McConaghy and Armstrong (1983) have shown that those with other-gender identity are more strongly aware of their identity than are exclusively heterosexual persons. Yet these feelings of being different might not be marked by parents or elders. Huston (1983) recognized "that particularly for children over about 7, the deviant behavior or thoughts may not be manifested in play situations or interviews with an adult present, but will occur when the child plays alone. No doubt they have learned the aversive consequences of admitting their `deviant' interests and fantasies" (p. 446).

If they don't use genitals as markers, how do children learn their true sexual and gender identities? All children compare themselves with others and decide: "I am the same or different." According to Eaton and Von Burgen (1981), children come cognitively to recognize gender by an orderly sequence with attainment at each step occurring in a self, same sex, and then other-sex order. Each basic gender-understanding level is acquired with understanding of one's self, as male or female, in the lead. Fagot (1985) found that "the child's level of gender understanding was unrelated to the adoption of sex-typed behaviors"; nevertheless, "sex of playmates and boys' play with feminine toys were related to understanding of verbal gender labels" (p. 83). From our cases, it thus appears that what is so for typical development holds for the development of atypical individuals as well. The significant difference is that individuals of a sexual minority have a much more difficult set of comparisons to make. The configuration of their anatomy or their biased behavioral predispositions, and in the case of surgically altered individuals, lack of genital sensitivity, does not provide the feedback offered to typical individuals. Nevertheless, these individuals recognize society's view of the gender to which they have been assigned and see it in conflict with their personal sexual identity. They then request sex re-assignment so their social gender identity and personal sexual identity can coincide.

Constructed on common events and feelings from these informants and the lives of others in general, a four-stage process of development is hypothesized. It attends to five aspects of life that provide a sexual profile of any individual: gender patterns or practices, reproduction, sexual identity, sexual mechanisms, and sexual orientation. These are recalled by the mnemonic PRIMO (see Diamond, 1995).

Stage 1. Same-different comparing. All individuals, atypical as well as typical, make a comparison between self and others. At different stages of life, each person concentrates or attends differently along the PRIMO levels of consideration. The toddler's main focus is in regard to gender Patterns and sex roles and the establishment of a sexual Identity.

Stage 2. Self-testing and niche searching: Everyday living provides situations and testing enough for most persons to come to terms with their sexual and gender Identities and to see them as concordant. Although typical individuals will still question the degree of concordance with gender-appropriate behaviors, e.g., "Am I masculine/feminine enough?" they will not have doubt as to "Am I male/female?"

Seeing oneself as "different," the sex misassigned or intersexed child feels alien or freakish and doesn't easily develop a clear category for self. The individual experiments and self-tests while searching for a male or female niche (Diamond, 1996c). During this ongoing process, the individual sees "across the playground" a separate group with whom he or she might feel

more in tune, more "like," more similar, and less different. But a conflict exists between the labels as understood and as now needing redefinition. Without anyone to discuss this with, conflict becomes imbedded and highly stressful. To resolve such doubts and reduce stress, life continues with a series of tests socially or self-imposed.

With puberty, both typical and atypical individuals must come to terms with the expected confluence of or disassociation between sexual Identity and sexual Orientation. They also have to contend with their new appreciation of sexual Mechanisms (e.g., arousal, orgasm) and Reproductive capacity.

Stage 3. Decision making and mental switching. Typical individuals accept their sexual status and psychosocial niche and remain forever at Stage 2. They rarely show cross-gender behavior Patterns and never seriously consider changing their gender, Identity, or Orientation. The conflicted individual, however, after a great deal of anguish, may come to identify more as the "other." Despite upbringing, the person raised as a boy can see himself more as a girl, and the one raised as a girl can see herself more as a boy. Before change is possible, however, the conflicted person must recognize that real change is possible and think the benefits outweigh the drawbacks.

Stage 4. Decision actuating and physical switching. Finally, with some revelation, trauma, recognition of another individual who can serve as a role model, or dramatic insight or "permission giving," the conflicted individual accepts the option and makes the significant switch to living, not in the gender raised, but as he or she feels more appropriate to his or her sexual identity. With greater sophistication and perhaps professional help, the individual comes to identify and accept oneself not as a typical male or female but one who was misassigned or is transgendered or intersexed. The transition among these four stages is gradual and overlapping.

Bem (1996), in a highly theoretical article, reviewed many studies regarding sexual orientation. In a vein similar to this article, he documented how individuals who will later become homosexually oriented early on see themselves as different from their peers. He hypothesized that this feeling of being different is a precursor to perceiving those who are different as erotic, a developmental process he envisions where that which is "exotic becomes erotic." Even though we both consider such individuals to feel different, my analysis of the cases presented here and seen elsewhere leads me to conclude the development of orientation is an independent solution as the person searches to establish his or her male or female identity. For the people discussed in this article, their choice of erotic partners emerged not from feelings of being "different from" but being simpatico with and sexually attracted to their lovers. It occurred later than developing a feeling for who they were themselves.

For surgically modified individuals or those who see themselves as different, models of their own "configuration" are not readily available. These persons constantly search for "people like me." Once a suitable model is found, as for instance provided by Christine Jorgensen for transsexuals, Virginia Prince for transvestites, or whomever for homosexuals, these models become significant prototypes with whom the individual can come to identify. The individuals in the three prime cases presented were very much influenced by models.

Many would afford great credit to family input in determining a child's adult sexual profile. In a significant review, however, Harris (1995) concluded that parental behaviors have no effect on their children's characteristics as adults and differences among adults have little to do with the home environments in which they were reared. This is adaptive, Harris wrote, because it will increase the advantage children have by learning from any source. She concluded that "almost all of the factors previously associated with the term environment, and associated even more closely with the term nurture, appear to be ineffective in shaping children's personalities" (p. 459). Harris credited the social peer group with the most influence on how the child comes to see himself or herself. In our cases, the peer group was instrumental in acting as a mirror for comparison.

Carter and Patterson (1982) showed that conception of gender, like understanding of other social conventions, becomes more flexible with age. In keeping with this, the possibility of change, at or after puberty, was considered by each and accepted by Joan and Sam. Billie, too, would have switched gender if she could have had a functioning phallus to go with it. It is not known how often intersexed individuals accept or switch from their sex of assignment (e.g., see Meyer-Bahlburg, 1993).

In contrast with individuals with traumatized genitals or intersexed persons, transsexual individuals who also change their gender, as children, are not usually discriminated against. Indeed, they are usually strongly reinforced as gender-appropriate (see, e.g., Diamond, 1996c, in press). They, nevertheless, compare themselves with their peers and come to feel they are not the same; they are different. There may be a relationship between transsexualism and intersexuality. It might be more than coincidence that Meyer et al. (1986) found that of 30 female-to-male transsexuals they studied, 2 had been born with ambiguous genitalia. Most recently, Zhou, Hofman, Gooren, and Swaab (1995) and Swaab and Hofman (1995) documented differences in the brains of transsexual individuals. Transgendered individuals might be considered intersexed, not with ambiguous genitalia, chromosomes, or gonads, but in regard to their brain structure and function.

It is appropriate here to mention that the view of transsexuals and anatomically ambiguous intersexed individuals is often different in regard to surgery. The former want anatomy to coincide with psyche even if it means

losing sexual function (Bentler, 1976). The latter desire sexual function, even at the expense of cosmetic anatomy. Other differences between these groups of individuals have been described (Chase, 1993; Meyer-Bahlburg, 1982, 1994; Shaffer, 1995).

So far I have focused discussion on the development of sexual identity; the personal core awareness of being male or female. For John, Sam, and Billie, securing their inner persona was the prime concern; solidifying their sexual identity was central to their existence. Development of their sexual orientation is also noteworthy. Significantly, it developed later, around puberty. This process coincides with the sequence delineated previously. Gender identity, as a recognition of a social phenomenon distinct from sexual identity, develops before or concomitant with the acceptance or awareness of preferred gender patterns. This awareness of preferred patterns develops prior to an acceptance of a stable sexual identity, and one's sexual orientation develops later (Diamond, 1976, 1979, 1995; Green, 1974, 1987; MeyerBahlburg, 1980).

Discussion with all three individuals indicated that they did not see their attraction to boys or men or girls or women dependent upon or related to their sexual identity. They viewed it as a separate developmental phenomenon independent of their sex or gender, arising autonomously. It was another feature of life with which they had to come to terms. None indicated they chose their sexual partners on the basis of how they pictured themselves. Sam, as a hermaphroditic individual, showed a great deal of flexibility. John and Billie always had been strongly gynecophilic. Labeling themselves or seeing themselves as "homosexual" was not seen as advantageous, but neither was it aversive. They each now accept their orientation as confidently as they accept their identity.

Bailey and Zucker (1995) warned of the danger of biased recall yet concluded that "there is clear evidence of a relation between patterns of childhood sex-typed behavior and later sexual orientation" (p. 44). A comparison made between what mothers and gay sons independently report about sex-typed as well as specific behaviors supports this view (Bailey, Nothnagel, & Wolfe, 1995). In the three current cases, the orientation seemed most predictable for John (gynecophilic), who, aside from the traumatic loss of his penis and surgical removal of his testes, was a physiologically typical male who early on doubted his female assignment. For the other two, their genital ambiguity seems mirrored by a greater flexibility in sexual orientation (Table 1). None, during any interview, offered comments, reflections, or insights to the effect that internalized societal stereotypes organized their choice of partner (see, e.g., Kite & Deaux, 1987, and Risman & Schwartz, 1988). Perhaps because these individuals were not part of any "gender community," and indeed had no close friends when growing up, they also didn't think in terms of any political or broader issue. Their focus was in establishing a sexual/erotic/love

relationship with someone, regardless if male or female, with whom they could feel fulfilled (cf. Clare & Tully, 1989; Coleman, Bockting, & Gooren, 1993; De Cecco & Shively, 1984; Devor, 1993; Diamond, 1995).

Obviously, the same forces involved in the sexual ambiguity of soma and identity can be involved in the flexibility in sexual orientation (Bailey & Zucker, 1995; Diamond, 1965, 1968; Meyer-Bahlburg, 1984). For these considerations and others, similar to the conclusions of Bradley et al. (1991), I prefer the terms androphilic, gynecophilic, and ambiphilic rather than homosexual, heterosexual, and bisexual. In a neutral fashion, these former terms refer to the type of partner one prefers. They emphasize the sex of the partner rather than focusing on the individual's sex in relation to partner.

In light of all these issues, it seems the traditional pediatric postulates for sex assignment/reassignment should be modified. Clinicians, with the belief that John without a penis would not develop well nor function adequately as a male, thought it best to reassign him as a female. In a similar vein, in their belief it would help in her development, they had Billie's enlarged clitoris amputated and Billie reassigned as a female. Coupled with consistent rearing in the newly assigned gender, this was supposed to lead to the best possible outcome. The same treatments would be advised today (see, e.g., Behrman & Kliegman, 1994; Blethen & Weldon, 1985; Burg et al., 1990; Kessler, 1990; Schriock et al., 1990). These anatomical changes, although perhaps of some immediate value, have definitely been seen to have potential long-lasting disadvantages (Diamond, 1996a, b; Diamond & Sigmundson, 1997). Despite unambiguous rearing, genital and gonadal surgery, and subsequent hormone medication, Joan, Samantha, and Billie rebelled at their situations. The fact that both Samantha and Billie essentially had the same original diagnoses, yet came to such different adult lifestyles, one as a man and the other as a woman, is also reason for physicians to show caution and conservatism in advising pediatric surgery, sex reassignment, and secrecy. Hurtig (1992), in a similar vein, reported on two 46, XY "sisters" with 5-alpha reductase deficiency. Both received urogenital surgery and estrogens to bolster and maintain their female-assigned and rearing status. One sister seemed to make a satisfactory adjustment to this condition, whereas the other rejected it and assumed life as a male.

Simplistic sex-assignment protocols, where "one set of rules applies to all," will not do. Indeed, society and the medical community must come to terms with different genital conditions rather than force compliance to any ideal male or female category (Fausto-Sterling, 1993; Kessler, 1990). Several recommendations are offered. First, for the unambiguous male or female with trauma to the genitals, physicians should maintain the original sex of assignment. Certainly males sans penis will have a definite psychological and social handicap, but there is no evidence this is worse than being reared as a girl with no inherent feminine PRIMO characteristics concomitant with that

assignment. Rearing will facilitate awareness of gender-role stereotypes and expectations but has not been shown to modify greatly preferred sex-typical behaviors and perspectives (Diamond, 1982; Diamond & Sigmundson, 1997). There is no documented case where a typical male has accepted assigned life as an androphilic woman despite such rearing nor a case of a typical female accepting imposed life as a gynecophilic man.

The second recommendation, extrapolated from these cases, is that if the child is established to be clearly 46, XY and has a micropenis, raise it as a boy. As in the case of the boy with the traumatic loss of a penis, such males also will be at a disadvantage, but there is no evidence it will be psychologically more difficult than being raised as a girl. Reilly and Woodhouse (1989), after studying 20 patients with a micropenis, reported that a majority show evidence of satisfactory outcome. They stated, "Two main conclusions may be drawn from our series: a small penis does not preclude normal male role and a micropenis or microphallus alone should not dictate a female gender reassignment in infancy" (p. 571).

Third, if the child is clearly 46, XX, even with a clitoral hypertrophy, raise it as a girl, but do no clitoral reduction. This follows from experience with cases like Sam and Billie, where both describe their attitudes toward surgery and reflect the opinions of others among their intersexed colleagues. A female with a large clitoris may be at some psychological and social disadvantage, but there are no data to show she would be worse off than being raised as a male or remaining as a female to grow to adulthood with diminished or absent orgasmic capability. How this would effect a child's early years is conjectural. The form of the phallus in both males and females may indeed be a bioassay of other features of neural development concomitant with shift in sexual orientation, but this has not yet been established. Nevertheless, keeping the phallus would allow sex reassignment to male if that would later be desired. Maintaining the individual's original sex would also preserve his or her gonads so fertility is still possible. With the traditional treatment, only the female's fertility is of concern (e.g., Behrman & Kliegman, 1994; Ratzan, 1996).

Fourth, in cases of ambiguous genitalia, a full evaluation must be performed. Examination should establish the exact diagnoses to determine the best course of action. Although individuals will have latitude in accepting different types of gender rearing, raise the child in the sex it can best be predicted he or she will most satisfactorily claim as an adult. In intersexed individuals, the size of the phallus, per se, should not be the determining factor (Kessler, 1995). The parents will be rightfully concerned, but the child remains the patient and should be the ultimate decision maker.

Baker (1981), Donahoe and Hendren (1976), and others point to the need for establishing a rapid diagnosis in cases of ambiguous genitalia. I agree. But, in distinction to these investigators, at least for the types of cases discussed

here, I suggest no immediate reassignment of sex or cosmetic surgery be done. This will maintain the child's erotic and reproductive potential until he or she can participate in any such significant decision. Further, as do Baker (1981), Meyer-Bahlburg (1993), Money (1994), and others, I advocate that all cases receive extensive counseling. However, I advise this to be multi-staged and detailed. Counseling for both parents and child should include sessions at every critical stage of development: birth, two to four years of age, school entry, puberty, and adulthood. Counseling should be initially for parents and increasingly so for the child as he or she matures. This advice should include full disclosure of as much material as the parents and child can absorb, with the door always open for additional consultation as needed. When and if appropriate, trained professionals should discuss sex reassignment and different sexual orientations as separate options with the child and parents.

The parents, and then the child, should compassionately be informed that he or she has been born with a relatively rare but not unknown condition called intersex. If the child's genitals have been traumatized, that too should be similarly discussed. The nature of the condition and the prognoses should be described clearly. Discussion should emphasize that most such individuals will adapt in the gender in which they have been assigned but might need help at least occasionally and a minority might later choose to change their gender. Physicians or social workers should provide support group affiliation, if available (Diamond, 1996b).

Almost all intersexual and sex-reassigned individuals come to recognize they are significantly "different" and will seek answers to their most intimate questions. It is better for them to get valid answers. Recognition of the normal doubts parents and children/adults will have about such genital conditions will enhance two-way communication. Questions by and between parents and children should be encouraged so that their decisions are made on a base of fact and experience rather than ignorance and fear.

Diversity and ethics also should be mentioned. Any biologist is aware of the advantages of diversity. Successful evolution depends upon a pool of different genes and phenotypes from which future generations might better evolve. Only history and a judgment call can indicate which contemporary paths will prove successful. Fausto-Sterling (1993) and Devor (1995) viewed different phenotypes as contributions of biology that represent, along with 46, X0, or 46, XXY and other combinations, manifestations of a natural pool from which contemporary society can benefit and other niches for the future might be exploited. I agree and, because their lives are so different, I believe all these sexual minorities contribute to the human condition in ways of thinking--in outlook on life--if not in terms of progeny.

Ethically complicated issues exist. Chase (1993), Diamond (1996a, b),

Diamond and Sigmundson (1997), Eichler (1986), Epstein (1990), Kessler (1990, 1995), Fausto-Sterling (1985, 1993), Zucker (1996), and Zucker and Bradley (1995) have questioned contemporary sex-assignment protocols and if, indeed, society and the medical community should not come to terms with different genital conditions rather than force compliance to some supposed ideal male or female category. Different treatment protocols revolve around different ethical approaches as to how intersexed individuals, hermaphrodites and pseudohermaphrodites, and those with transsexual ideation or traumatized genitals are best managed. Proponents of one view consider surgery to be a cure and rearing in the cosmetic sex a better choice. Proponents of another view consider surgery a technique to be held in abeyance unless medically urgent or requested by the individual. They believe that leaving well enough alone is the better choice and the erotic and reproductive needs of the adult should take precedence over cosmetic needs of the child. One side considers surgery "treatment," and the other considers it "mutilation." One group presses that change must come from social movement, and the other figures that the contemporary needs of the individual outweigh waiting for culture to catch up. No position ; has all the evidence in its favor, and resolution is not simple (see Huston, 1983).

The ethical question that must be asked at the time of sex assignment is "Will this child thank you for this decision when it is an adult?" (Kipnis & Williamson, 1984). All cases of ambiguous genitalia, both with surgical reassignment or without, must be followed with periodic long-term evaluation to provide guidance for the future. Kessler (1995) reported that about one quarter of a sample of college women retrospectively indicated under no circumstances would they have wanted their parents to allow reduction of a large clitoris at birth; about half would have wanted the reduction only if their physical health would have been impaired, and the other quarter wanted reduction only if the reduction would not have impaired pleasurable sensitivity. College men were asked the more complicated, yet somewhat comparable question regarding having a micropenis at birth and potential for sex reassignment. All but one "would not have wanted surgery under any circumstance."

In keeping with the recommendations given previously, new postulates and recommendations are offered that, it is believed, will increase successful decision making and decrease the likelihood that harm will result. They are (a) individuals are psychosexually biased at birth; (b) psychosexual development is related to but not dependent upon the appearance of genitals; (c) discuss openly and fully any doubt as to gender, identity, and orientation; and (d) support change of sex whenever it is by informed choice.

Unfortunately, the types of anomalies and genital traumas to which humans are subject are many, and no simple set of rules will serve for all conditions. These new postulates and recommendations, for the present, are limited to

the types of cases discussed in this article or those closely enough associated with them. Subsequent research will have to determine detailed recommendations that need be applied to other types of cases where sex reassignment because of ambiguous genitalia may be an issue (e.g., congenital adrenal hyperplasia, hypospadias, or partial androgen insensitivity syndrome). I suspect, however, that although the recommendations for sex assignment might have to be modified, they will probably hold for certain of these cases as well (see, e.g., Slocum, 1995, regarding PAIS).

All individuals undergo a developmental analysis of "same or different," yet what is proposed for intersexed individuals--allowing them flexibility and choice--is both controversial and difficult. Ready agreement is not anticipated, and vigorous discussion can be predicted. The status quo, however, is already known to be seriously wanting. One must also keep in mind that perfection in medical treatment cannot be demanded. As Aristotle (1986) noted more than 2,000 years ago, the best goal is happiness but the means to its attainment debatable: "Precision [in ethics] cannot be expected ... The problem of the good, too, presents a similar kind of irregularity, because in many cases good things bring harmful results ... Search [instead] for that degree of precision in each kind of study which the nature of the subject at hand admits" (p. 316).

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