A Conversation with Dr. Milton Diamond

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Milton Diamond, Ph.D. is a sexologist who has published numerous articles pertaining to his long interest and research on sexual identity formation and sexuality.

From early on in his career, Dr. Diamond has investigated claims about the malleability of sexual identity and along with H. Keith Sigmundson, MD, Dr. Diamond su the conclusions of an important case study conducted by the renowned medical psychologist, Dr. John Money. The so-called John/Joan case was originally presente altering the infant's upbringing and genitals could easily change a child's sexual identity. Thousands of "sex reassignments," with accompanying surgeries were perfo conclusions erroneously extracted from this example. Doctor's Diamond and Sigmundson discovered that Dr. Money, who was touted as "one of the greatest sex res century" for this celebrated case, had misinterpreted or misrepresented his data to support his theory that nurture (social factors), rather than nature, had the grea one's sexual identity.

The Diamond and Sigmundson discovery was published in a scientific journal, and the information was broadcast to the public in the New York Times, Time, and Ne and other media around the world. This case, referred to as the John/Joan case, is one in which a boy had his penis accidentally burned off during circumcision usin advice of John Money, the boy's parents began to raise him as a girl and then send him for first stage sex reassignment surgery that included castration. When the teenager the child's physicians started him on female hormones. The parents were told that under no circumstances were they to tell the child its sex at birth. For t public and medical communities were led to believe that the child had adapted to the change. In truth, there was resistance to the sex reassignment from the very once a landmark case to prove the influence of nurturing is now regarded as significant to the theory of a biological premise in the formation of sexual identity. Joh being a girl didn't feel right, despite his female name, the absence of a penis, having a feminine body with breasts, and being reared as a girl. This supports the tra of "knowing" they are the opposite sex despite their bodies and what they are told. Current brain research is further elucidating and giving credibility to these asse

The John/Joan case was outlined in a Dec 11, 1997 issue of Rolling Stone magazine, and in a best selling book "As Nature Made Him: The boy that was raised as a

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DK: When you were a graduate student at the University of Kansas, did something occur which motivated you to have questions about the primacy of nature over n

MD: I don't think there was any single thing. As a graduate student I was studying behavior from both biological and psychological perspectives and was repeatedly factors that influenced behavior. But since I was working in a laboratory that specialized in research on sexual behavior it was questions within that realm that took attention. Within that lab [of Dr. William C. (Bill) Young] were many working on questions of sexual development so, as a graduate student, it was easy for me to s research. I was fortunate that my mentors at the time were, in addition to Bill Young, Bob Goy and Charles Phoenix. The most salient question being studied at the factors were most crucial in determining adult sexual behaviors and how did they develop?" In the laboratory the work was mainly with guinea pigs and rats. I was those factors in humans that structured sexual behavior. The zeitgeist at the time held that it was rearing that most determined basic sexual behaviors such as whe would act as males or females and toward which others they would be sexually attracted. It is within that framework that we asked if the factors that determined b the upbringing or in the biology with which the individual was born.

DK: I'd like you to talk about intersexuality as it relates to transsexuality and to elaborate on the concept of "brain sex" if you would.

MD: To best answer that question I think it worthwhile to first define some terms. To put it as simply as possible a ***transsexual*** is a male or female individual who more suited or "meant" to live as a member of the opposite sex. Thus a male might believe, "I should really be a woman" or even "I am a man trapped in a male b in a female body." On the opposite side of the coin, a female would think analogously. These are individuals that see the world as having two basic "flavors," male woman. These convictions are strong enough that the individual goes to great efforts to change sex. An intersexual, in distinction, has recognized combinations of n biological characteristics. Often the person with an intersex condition has genitalia that are ambiguously male or female. An intersexed individual might have the se male and the body characteristics of a female or vice versa. Or an intersexed person can have male and female gonads, both a testis and an ovary. Recognizing bo features in body they may also manifest it in their behavioral preferences. Such persons typically don't see male and female as opposites. They can accept, with mo they are male and female combinations in body and mind. However, the social situation in which they find themselves will determine how they react to their conditi and identify socially as men, others as women and yet others as intersexed individuals. The term, years ago, for an intersexed person would have been a hermaphr this condition with relative ease while others meet it only with difficulty.

Since the brain is the organ determining or scripting male or female behaviors, the term ***brain sex*** is a short hand to reflect on how an individual thinks and organ whether in stereotypical male or female ways. It is certainly true that the brain is the most sexual organ of the body and the term brain sex reflects its male or fe

directs the individual to think and act more like a stereotypic male or more like a female.

For transsexuals, since there is little evidence that they have been brought up in anything but typical circumstances, and there is no obvious ambiguity in their biolo arises "How do the feelings of being of the opposite sex develop?" The simple answer is "In the brain. Transsexuals have the mind-set of a person of the opposite s

Since individuals with different intersex conditions must also come to terms with their situations and live in our society as men or women the analogous question ar decide how it is best to live?" Again, the simplistic answer given is " It is determined by their brain-sex." And of course this may all be done at an unconscious leve that this is not without awareness of the person's position in and reaction to society. The brain is integrating the individual's personal history with his or her social, milieu.

Transsexuals make this major change in their lives, often at great sacrifice socially, financially and otherwise, and without apparent provocation. Transsexuals have anatomical traits that are of the opposite sex, they have typical genitalia appropriate for their natal sex but, I think, their brain is somehow predisposed to code for and they are thus, by our previous definition, intersexed.

Currently there are only a few pieces of evidence of actual structural differences between male and female brains and fewer of the differences between the brains o intersexuals and others. But this may be because we don't yet know where to look for such differences. The differences are unlikely to be of major size and might e different thought patterns are generated or organized. We might have to look for differences in physiological or biochemical brain processes rather than differences structural differences. For instance we know that females use both sides of their brains in language processing while males typically only use the left hemisphere.

The bottom line is that any behavioral differences in how one sees self and others, and how one interprets ways of living in society, must lie within the nervous syst most involved with such analyses is the brain. Even if it is something about gender that we learn from a figurative blue room upbringing or a pink room upbringing, encoded differently in the brain somewhere. And we don't as yet, know how to recognize such differences. Let me use an analogy. All people are born with a dispos communicate with voice. When one learns to speak, there must be a change in their nervous system. If a person learns to speak English rather than Chinese, that in the nervous system. Now, English and Chinese may be encoded in the same place, but each would have a unique code. We could, by extension, say there is a Ch brain. With the learning of a language there generally is no or little thought given to why we learn Chinese or English. We learn the language of our parents and tho learning of gender is more complicated but is similar in that we learn the gender differences of our parents and those around us. For the transsexual, I think their b the gender they are learning doesn't fit.

DK: How does this concept of brain-sex effect development?

MD: Sex and gender, and all the things that we learn associated with them, are encoded in our nervous system. This is manifest by a person's predisposition to lea things and avoid doing other things. Some kids like to play with frilly dolls and other kids avoid them. And with this predisposition, comes a somewhat innate feelin social group of either boys or girls. What I think happens is that as kids grow they are keenly aware of differences and similarities. I don't think there is a brain ten says male or female, boy or girl, but I do think we have a template that basically says "same or different" and built-in predispositions which encourage and discoura over others. When these predispositions are sex or gender related we could say they are tied to brain-sex.

With growth I believe the child categorizes his or her interests and proclivities as "same" or "different" in comparison with those around. When the great majority of the child feels similar in interests and behaviors are boys, that is how he or she comes to identify. When the great majority of those with whom the child feels simi how he or she identifies.

As every child develops, whether he or she will eventually end up as a typical male or female, a transsexual, an intersexual, or whatever, he or she looks around an "I'm like my playmates" or "I'm different" from others that are called by my "category." If the person is a male and called and treated as a boy, and he feels he's l around town, or in his family or neighborhood, everything seems fine and he doesn't question his gender situation. But problems develop when he feels he is not lik he feels a greater affinity to those called girls or thinks he is one of them. Depending on how strongly and clearly the child feels these differences will determine ho the boy strongly enough sees himself more as a girl he can envision himself becoming a girl and woman. If a girl strongly enough sees herself more as a boy she ca becoming a boy and man. These self revelations are not necessarily clear cut nor rapid in appearance, nor do they always occur very early in life or in the same wa

Often there is a period of confusion. The boy might say to himself something like "Mommy and Daddy call me a boy and yet I am not at all like any of the others th called boy." While the only other category the child knows is "girl" the thought runs through his mind that he might be one of those. But that thought can be too gr to be easily accepted. There often is a period of doubt as to how to reconcile these awkward feelings. The boy might imagine he is, if not a boy, than possibly an "i some sort of a freak. Eventually he might say, since he knows of no other options, that he is a girl or should be a girl. With a child's way of believing in the Tooth F he might even come to expect he will grow up to be a woman. When the realization develops that such won't happen, the child than begins to seek ways to effect Of course the same sort of situation might hold for a girl. Mary might say to herself "They're calling me girl, but judging from what I prefer to do and how I prefer more like those kids across the street that they're calling boys. I'm different from all the girls I know." But, Mary doesn't necessarily go running to mommy with the might even think "Mommy, I'm not a little girl, I'm really a little boy." It isn't necessarily put in those words but might be expressed behaviorally.

These gender doubts can last for years and the individual might live with the discomfort. Eventually, however, they may be resolved by the person saying somethin male body I am a girl and want to live as such." Or he will live as some sort of inbetween person accommodating as best he can. This is not an easy decision nor c the uncomfortable feeling of not fitting in as "assigned" and reared. With maturity and understanding and awareness of the implications of the terms and recognitio anatomical realities, the male or female might say: "I must effect a transition so that my body matches my mind." For many persons, while the feeling and desire t in life, they don't effect the change until a major life event comes to pass. A parent might die that they didn't want to offend or disappoint while alive, a marriage a have become part of their life in an attempt to adjust to a typical existence and they didn't want to jeopardize these relationships. A traumatic divorce might trigger after change. There are many life conditions that are considered in making such a life-altering change. The individuals that switch gender without any apparent med decision are called transsexuals. Intersexuals too might switch from the gender in which they were raised but do so with more obvious medical conditions associated

DK: It fits. I like the way you're talking about this, because it's not like I was always cognizant of the male-female thing, it took time to really figure it out. I was d couldn't identify with girls and felt alienated because of that.

MD: I don't know your background, but my guess is that your parents were calling you girl and calling you by a girl name, and you were looking around and saying "Somehow this doesn't fit." If you have a brother, you might say, "Hey, I'm more like my brother than I am like my sister."

DK: Right, I grew up having both sisters and a brother and felt I had much more in common with my brother. I was thought of as a tomboy and with reservation I identification because it separated me out from my sisters and gave me more freedom. I felt that I could operate under different perimeters. Even so, being called a queasy feeling and it didn't really fit and I learned to resent it - it meant I was acting inappropriate somehow and I didn't believe I was. Later I took on the label "l didn't fit either since I never felt myself to be female. I had to try on all these different things to see what did fit.

MD: That follows. If you're different you also want to find if there are any others like you. You wonder: "Who am I the same as?" It's a great revelation when you f somebody else who had similar feelings and that you're not the only one in the world like you. That is usually a great day. This also points to the importance of pos

DK: Yes. I first met another FTM 25 years ago and believe me, it was my moment of truth!

Mickey, in your intriguing article *Self-testing among transsexuals: a check on sexual identity*, that appeared in the Journal of Psychology and Human Sexuality in 19 distinctions between the terms sexual identity and gender identity. Whereby, gender identity refers to how people see themselves relative to societal expectations a the private, internal feeling of self that says, "I am a male" or "I am a female." These are the definitions and terms I am most familiar with but I am becoming incr these terms are sometimes being used interchangeably, possibly incorrectly, and that the term gender is used not only in referring to one's masculinity or femininity

to morphology, whether someone is male or female. The use of the term sex as a noun also seems to be outmoded outside of scientific circles and the word gender come into favor just as the term transgender has been popularized and applied to transsexuals. These inconsistencies further complicate an already complicated issu shed some light on this?

MD: What you are referring to really is a commentary on the fluidity of language and the different ways scientists and laypersons use terms. Several of us in the se tried to standardize the use of many terms but others prefer their own usage. I place myself with those that prefer to standardize terms. Basically I consider gende and societal contexts and sex to refer to medical and biological contexts. For instance male and female are biological (sex) terms while boy and girl or man and wo (gender) terms. It is thus obvious that a male can act like a girl or woman and a female can act like a boy or man. Following from that, as I see things, the distinct sexual identity and gender identity, as concepts are crucial in the understanding of many aspects of transsexuality and intersexuality.

For the typical individual, sexual identity and gender identity are concordant. He or she is viewed in society as a boy or girl, man or woman. That is their gender id themselves as biological males or females respectively. That is their sexual identity. To the typical person there is no conflict between sexual and gender identity alt involved refer to different things. Now consider the transsexual. The transsexual sees how he or she is viewed in society, either as a man or woman and recognizes gender identity. It conforms to the individual's sex as male or female. But, the female individual who thinks she should live as a man recognizes male as her sexual gender identity and sexual identity are in conflict.

To reconcile the differences the transsexual says: "Change my body not my mind."

Knowing that society interacts with her as a woman because that is the way she looks, and she prefers it interact with her as a man, she chooses to have surgery conform to mind. A male body type will comfort her feeling of being the male she desires to be and assist the world in treating her as a man, the gender identity sh gender identity, how she is viewed by society, will then match her sexual identity. Some people, it should be clear, use the term gender to replace the term sex be phobics. To such persons gender seems "clean" while sex is viewed as "dirty."

The term *transgender* was popularized by Virginia Prince in the 1970s to describe people like herself who prefer to live as the opposite gender without undergoing s only thing the transgenderist wants to change are features of their gender, not their sex. However, the term has become popular particularly to describe individuals and behavioral characteristics and preferences typically associated with both males and females and has become more inclusive. The transgender category now-a-da an inclusive term to describe transsexuals, transvestites, drag queens, so called gender benders and others.

It might be useful here to introduce the term *sexual orientatio*n. This refers to the type of person with whom one wants to have erotic and love relations. Most mal toward females and vice versa, most females are oriented toward males. When discussing transsexual and intersexed persons I prefer to use the terms *androphilic* *gynecophilic* (female loving) to describe the preferred erotic or love interest. This gets away from the confusion and social taboos when terms like heterosexual and used. For instance, what would be homosexual or heterosexual for an intersexed person who has both male and female biology? And whose view of things should p transsexual's or the onlooker's, when considering the individual's partner before and after sex-reassignment surgery? *Ambiphilic* (both loving) would replace the ter

DK: The term transgender is often used as an umbrella term meant to include all sexual minorities but I think there are important distinctions between the various glossed over. Transsexuals are attempting to undergo sex reassignment or have done so and want to be medically and legally recognized as their "chosen" sex. Wit diagnosis these surgeries would not be performed. The medical condition now referred to as *Gender Identity Disorder* (GID), strikes me as a misnomer since one ca identity disorder without being transsexual. As you pointed out, there are different elements to one's identity and if there is nonconformity in any of these aspects, considered to have a gender identity disorder. The term or "condition" could address all sexual minorities. For example: In my case, I consider myself male, always identification, and I consider myself heterosexual in that I prefer to have sex with women. I fit the male norm on all accounts except for the fact that my morpholo female. In using the transvestite Virginia Prince as an example, this is someone who would likely be considered to have a gender identity disorder along with being point is that there is no longer a medical diagnosis ascribed solely to the transsexual.

MD: Your comment relates to several issues. One issue is how a gender identity disorder, small letters, is viewed as a general term in popular language. Another iss Identity Disorder, capital letters, is seen as a medical condition. GID is a constellation of thoughts and behaviors that is still used by the scientific and medical comm and label transsexuals only. One major component of the diagnosis that separates this GID and transsexuals from all the other groups subsumed under the term tra only the transsexual feels he or she is rightly a member of the opposite sex and persistently wants surgery and hormones to effect a sex reassignment. And while D transvestites and others might have some aspects of gender confusion or dis-ease or dis-order, they don't fit the medical definition of GID. One problem you may h the word "disorder" has negative connotations. In the medical definition the term reflects the psychological distress which the transsexual usually shows.

Certainly transvestites and others can have some gender conflicts and disputes with societies' strictures but their condition usually don't reach the level of intensity transsexuals. They also don't need the medical communities assistance in affecting their life roles and behaviors.

Lastly, we must admit that the general public and many persons from different disciplines interchange the terms sex and gender without any concern for a precise term.

DK: Could you please discuss the issue of "passing." I think that in some instances it is cruel to expect someone to live as the opposite sex for one year prior to go This is particularly true if the person can't easily pass when cross-dressed. I understand the need for safeguards, but there are many individuals who aren't fortuna out with the physical features of their self proclaimed sex or even have an androgynous presentation. Such persons are subjected to endless ridicule. By the time a professional he or she has done years of soul searching to finally come to the decision to transition - waiting yet another year is still no guarantee that the decision I can better understand that there be a rigid criteria set up for surgeries. I believe that as transsexualism is better understood and more accepted and as more prof and qualified to evaluate whether or not someone is truly transsexual and to separate them out from persons who are either psychotic or delusional, we will find re current obstacles to transitioning.

MD: Your concerns are well understood and a frequent topic of discussion among professionals that try to adhere to the standards of care proposed by the Harry Be Gender Dysphoria Association (HBIGDA). As you know, this professional society, named for the physician who first extensively studied transsexuality, recommends a (SOC) for transsexuals which includes a "real life test." This test requires living for up to two years in the gender to which the individual wishes to transition. The p protect the individual and the professional in this interaction and decision making process. First off, these recommendations are not written in stone so different the differently and some are more permissive than others. Thus, in actuality, a therapist might be more liberal with one who can not pass easily and might consider hor as you well know, there is a great difference between a male wishing he were living as a woman or a female wishing she were living as a man, than actually living test allows the individual to "try the life" out before too many irreversible changes occur. The administration of hormones can induce changes, which would be difficu are frequently given after the individual has at least some real life experience and feels comfortable in the chosen gender. There are also instances where hormones or even before the switch just to ease the transition and passing.

But I do think caution is warranted and would not feel comfortable if all the safe guards of the standards-of-care were removed. Yes, doing away with them would r transition but that is not always a good thing. I've probably seen several hundred transsexuals who have satisfactorily made the change. And they are no doubt hap satisfied with their lives now than they were before the sex reassignment.

However, I've also seen two that were very unhappy. And they couldn't easily go back to living as they had been. These two both had money enough to be able to rigmarole of evaluation, counseling and the real-life test. One went to Casablanca and the other to Mexico. They paid their money, got the hormones and surgeries late found out that their lives hadn't changed as they had hoped. They are two very unhappy campers. I have to admit, these are only two out of several hundred warning not to bypass the test and evaluation.

DK: That is certainly a low percentage. They may have forgone an evaluation knowing they wouldn't fit the criteria set in place. Their regret may also have been du results. At any rate, with such an important life decision I think it is extremely important to confer with professional counsel. Numerous studies have been conducte

are the best candidates for sex reassignment surgery. Those that were least satisfied were typically those who transitioned late in life. The reasons for delaying the mentioned earlier, are varied - some people simply didn't know how to proceed, the information wasn't available to them or they couldn't locate professionals in the familiar with the condition. Others had doubts yet their lives weren't interrupted by debilitating feelings of unease about their bodies until they were well into adulth were affected by their feelings of unease, yet they went on to establish careers, raise families and so on as opposed to the transsexual whose early survival hinged

In your article, *Self-Testing Among Transsexuals: A Check on Sexual Identity*, you offer some keen observations that begin to explain behaviors that are atypical to population as a whole. Your paper documents "a phenomenon which more than a few transsexuals undergo in trying to reconcile their disparity of sexual and gende the behaviors of persons who, for an extended duration, overindulge in rather than shun behaviors typical of their birth sex. I label this a process of *self-testing*." Y transsexuals who are *self-tested* and those who are not: "With c*onvinced transsexuals*, repeated normal encounters with living, from early on, seem an affirmation other sex. Failure in gender stereotypic behaviors, being accepted or rejected without fanfare or concern by nontranssexuals, is cause for internal reification by *conv* that they are 'in the body of the wrong sex.' They do not need nor seek any self-test; their *living-test* convinces them early on. *Unconvinced transsexuals*, while als from early on, nevertheless, continue to question this disparity between inner and outer sex and eventually only decide they are transsexuals after a period of *direc* prolonged arduous self-examination. This process is often quite deliberate. It may, however, become apparent only in retrospect. Individuals of this second group of *self-tested transsexuals.*" Later in the article you cite specific case examples of self-tested transsexuals, a female-to-male transsexual who, by all outward appearan successfully as a woman. You say, "Although eminently successful and reinforced as a professional stripper and domestic wife and mother, B.B. felt, nevertheless, s as a man. Her inner voice was stronger than any external reinforcement. Her *self-test* convinced her that although she could easily pass any test of female (social) could not pass her own *self-test* of internal *sexual identity.*" B.B. first felt herself strongly to be male at age seven, but it wasn't until much later that "she" would tr was particularly struck by this example since I myself never lived any part of my life in the female role, nor do I personally know of any FTMs with the experience y I do know of FTMs who married and bore children. In effect, you are pointing out examples of transsexuals who have compensated in a very dramatic way for the f early on with hyper-feminine or hyper-masculine (in the case of male-to-female transsexuals) behavior.

I have seen this phenomenon in practice, on more than one occasion, in the case of male-to-female transsexuals. These categorical differences between transsexua early on and transsexuals were either classed as *primary* or *secondary* transsexuals. Your paper is the first I have read addressing this issue and not only do you ac how it works and offer explanations. I am curious about the two transsexuals you mentioned earlier who came to regret having had sex reassignment surgery. Was individuals *self-tested* transsexuals?

MD: It is not clear. It might have been so with the first one. She had been in the marines, came out of the military service with a satisfactory record, and decided t make their standards for masculinity felt he would be happier as a she. He had the money and family connections to get the surgery and went and did it. She is no about it. The second individual also had money and apparently just went and had it done. I have to be somewhat vague about these two since I saw them when th all was said and done and wanted to know how to go back. They wanted from me a simple solution as they had sought for their originally gender conflicts. When I one, they left.

But there are people who make every type of decision—there are female-to-males (FtM) who only have a hysterectomy and their breasts removed and don't have p for example, and they are happy. Others want the penis reconstructed. Some male-to-females (MtF) have their penis and testicles removed, most all have extensiv some go on to have their Adams' apple shaved or jaw reconstructed. Each one makes a decision for him or herself as to how much surgery he or she wants or can Prince, the well known transvestite is convinced that many—I don't believe this, by the way—transsexuals would be happy if they were simply allowed to live in the changing their genitals. She believes this because she's done it herself. On the other hand, I've heard some surgeons say that some of their TS patients never seem always want more surgery.

DK: So, Virginia Prince is basically projecting her own experience onto everyone else.

MD: Exactly ... it's like, "Hey, I did it, why can't you do it?" By the way I think that many homosexuals have some similar thoughts. They think of transsexuals "If y with someone of the same sex, just do it. You don't have to be a transsexual to achieve your goal." Of course not all transsexuals are oriented toward those of thei

DK: While I accept that there are varying levels of discomfort one may have with their body's sex, I think it is also important to look at why many individuals, who FtM, choose not to have surgery. If pushed for an explanation, a vast majority of FtMs say they would have genital surgery performed if they could be guaranteed an aesthetically pleasing and sensate penis from which they could urinate and perform sexual intercourse. Aside from the enormous costs and risks involved, the lik of these objectives met is extremely rare.

MD: Yes, all these aspects need to be looked at and there is a lot of variety among the population of transsexuals. But, in comparison, it should be said that most M constructed even if it doesn't work well.

DK: In recognizing this range of diversity, would you suggest that the criteria set for sex reassignment surgery be restated or reconsidered to include a broader ran requesting surgery whose experience may not fit the current requirements?

MD: I'm not sure of your question. I think that people ought to be allowed to live however they want. If they want to live with chickens I think they ought to live w someone wants to wear green hair, I think that is OK too. So, that's one thing. Now the law is generally not that liberal nor is society. The law wants most things t lines. For example, in Hawaii the legislature is discussing the issue of whether we should allow individuals of the same sex to marry. They don't even want to think considering transsexuals might mean in this because then they might have to consider people that are "same-sex" married already. In regard to new looser criteria reassignment surgery, all I can say is that the standards or requirements for such are always under review. And there are post op transsexuals on the HBIGDA revi we have more information and know better, I think it is appropriate to follow their guidelines.

DK: Of course. I know a number of transsexuals who, once their appearance changed solely from the use of hormones, managed to get the sex designation on thei changed simply by saying a mistake was made. As I see it, the true deception was the original designation, the assigned sex at birth. What would your perception legal distinctions and the motivation behind it?

MD: I think some of the gender distinctions have value and others not. Most of the motivation behind the legal distinctions goes back to our religious and cultural v Christianity, Islam and in other religions and in secular culture as well, people are very concerned with male/female difference. This background sets the stage for s very different functions in the religious world or in society than does the female. With these beliefs come certain privileges and certain restrictions and responsibilitie different genders. The distinctions also facilitate matters of expectation; stereotypes are sometimes helpful but admittedly, they can be detrimental. I see many ben and sexual expectations much less rigid.

DK: I can certainly believe that. That brings something interesting to mind .. In my experience and in the experience of others advocating for transsexual rights, I'v of our strongest supporters, ironically, are right wing fundamentalist Christians. They seem to be more sympathetic with our goals than a lot of leftist politicians. I b they find homosexuality so abhorrent and they see transsexuality as the perfect solution to eradicating the behavior. If gays and lesbians would just have "sex char no more same sex relationships. You know, [laughter] when it works for us, why not, but...

MD: You're just telling me your political agenda, that's all. But I wouldn't put too much stock in Right-wing religious support for transsexuals.

DK: [laughter] Yeah. Right. Obviously, I would never support anti-gay legislation or anything of the sort. I do find it laughable that the conservatives believe they've us. The thing they don't seem to realize is that not all transsexuals are heterosexual.

MD: Right. You know, another interesting thing that comes to mind when I think of religious fundamentalists is that many early artists depicted Adam and Eve as h some early paintings both Adam and Eve were depicted with both a vaginal cleft and a penis. This comes from the Bible. In Genesis it speaks of God creating the fi something like "male and female created he them."

DK: That's very true.

Mickey, I'd like to introduce the reader to the John/Joan case because of it's significance to the topic of transsexuality and because of your involvement in bringing findings in this aspect of John Money's research. This case serves as an excellent example to confirm the hypothesis of nature over nurture; that we know what sex age and any amount of social conditioning won't deter us from our innate conviction. Would you please describe and elaborate on this case?

MD: Well I think you did a good job in your introduction. The John/Joan case was the unfortunate story of a set of normal identical male twins. They developed a pe phimosis, which is a closing of the foreskin, so it becomes difficult to project the head of the penis. It can make it difficult to urinate and the closed foreskin can ac gunk. To correct this condition the boys were sent for circumcision. Instead of the circumcision being done with a knife and bell clamp as is typically done, it was do device that basically uses a hot wire to cut. Surgeons often like to use such an instrument in surgery because the heat also closes off any cut blood vessels. In any accident and the penis of the first twin was burnt off. For privacy sake, in our publication, we called him John when living as a boy and Joan when living as a girl. T about the decision of "What to do now with John?" What could be done for a boy without a penis? The local physicians they consulted recommended he have later c fashion a penis.

However, they saw Dr. John Money on television telling how a male (transsexual) can have surgery to live as a contented female. He was then consulted. His soluti idea that males and females were psychosexually neutral at birth, and any male without a penis would be better off living as a girl and then as a woman, led him to the child be given appropriate sex reassignment surgery and raised as a girl.

The parents followed Dr. Money's advice. This sex reassignment included removal of the child's testicles and scrotum, and preparing him, to have a vagina. The par could to raise the child as a girl we called Joan. As the child grew up, however, Joan began to look around and say, "Well, they're calling me 'girl' yet I'm more like am like the girls around here." "My parents are calling me girl and I have a girl's name but I'm not like any girl I know. I think more like a boy and prefer to do bo was a long transition stage before Joan would come to refuse to live any longer as a girl. First off, not only did Joan realize something was amiss, so did her school her for the incongruities between her male-like behaviors and her female-dress and appearance. They called her Gorilla since they saw the male in her behavior an despite the absence of typical male genitalia and the administration of female hormones to induce breast growth and feminine hips and fat deposits, Joan decided s live as a girl. She had to live as a boy. After the switch she was called John instead of Joan. After the switch Joan was eventually received better as John than as th led to believe she was.

With psychiatric help and hormone therapy in addition to the surgical removal of his breasts and construction of a penis, John developed into a mature man, marrie adopted his wife's children. He now lives as a self-respecting husband and father.

DK: Now, was John Money following up on these twins the entire time?

MD: As far as I know he was aware of how the twins were developing.

DK: OK, and during this time he was writing all these reports saying that his theories were correct and the outcome was what he expected?

MD: That appears to be so.

DK: So you're the one that's responsible for following up on the reports and finding out what actually happened to John; you along with Dr. Sigmundson?

MD: Correct.

DK: You're quoted in this article from the Journal of Sex and Marital Therapy: "Zucker and I agree that the significance of the original twin reports has been over pl certainly true for the credit the twins' story of female conversion received as supposed proof of the power of a gender conditioning. The actual failure of this sex rea been as widely recognized. Possibly, since it was not a surprise, nor as noteworthy or as newsworthy or not a 'politically correct' finding." I understand that there is against this type of research given current politics. Certainly feminists are opposed to the idea of identifying biological determinants that rule behavior and illuminat between men and women since they attribute social conditioning as the cause of sexism and use the concept of nurturing as their platform to discuss it. There are reassignment surgeries still being performed on intersexed infants without their consent. Could you address how politics affect or enter into research?

MD: I think you are addressing several separate things. Intersexed infants with ambiguous genitalia are often given cosmetic surgery because the physicians and or this is better for them. If you think this is in response to the politics of gender that everyone has to be clearly male or female, I guess your comment fits. I think, h treatment is wrong on ethical grounds and because there is to date no published evidence that it is either necessary or warranted.

But you are certainly correct in referring to the politics of gender when it comes to many Feminists. It definitely helps the Feminist cause politically to argue that th between men and women is how they were raised. And if only child-rearing practices were equal, the differences between the sexes would disappear. Certainly we field to offer equal opportunities to both men and women. But we have to recognize that often men and women come to the field with different abilities that are lin gender. And sometimes recognizing these differences is actually helpful. If it is a disadvantage to be short, society can offer a ladder or stool. By the way, I conside we use that term to mean somebody who wants equal opportunities for men and women.

A last thought is that getting funding for sex or gender research is often handicapped by political considerations.

DK: I certainly ascribe to general feminist principles as well. At the same time, when I'm looked at as a traitor of the female sex, or when Feminists attempt to sub might better explain the existence of transsexuals, why I feel the way I do, I've got to object. Transsexuals simply don't suit Feminist objectives; they see our exist social phenomenon.

MD: Yes. They're saying as transvestites or some lesbians might say: "Hey, look, I solved my problem my way, you ought to solve your problem the same way I so feminists would think by transitioning you are joining the enemy rather than fighting for your right to be a masculine female.

DK: Absolutely.

MD: You may know that several years ago there was a feminist music festival in Michigan that some transsexuals wanted to attend. Many feminists got up in arms; these are cheats, they're phonies, we don't want 'em." That, to me, is crazy.

DK: You know, I was at that music festival as a lesbian when the first male-to-female transsexual showed up. I think I was in agreement with the lesbians. It just g resisted being transsexual! I hope I'm making amends for it now.

[Laughter]

MD: You ought to write a piece on how your views of the world changed from when you considered yourself a lesbian to now when you consider yourself a transsex

DK: I intend to; reflecting how one's perspective changes in accord with various stages of personal realization is not only interesting to think about but an area I alw to read about. When I first read about the John/Joan case in John Colapinto's Rolling Stone article, I was stunned and moved to tears. At the same time, the story the conclusion when John reclaimed his true identity. The story reads like a major event when you finally came in contact with Doctor Sigmundson and intervened in very dramatic example of what ignorance or even innocence can do in relation to the alteration of an anomalous or unexpected identity. It also points out to me the case study like that. I have to ask, not withstanding your own research, what would you consider the most significant dimensions of related research today?

MD: Many different people are looking at different things. But, I have to mention that there is little money for sex identity research so all such work is often difficul allotted for other things or financed out-of-pocket as much of mine is.

Nevertheless, there has begun a good deal of research into different intersex conditions both here and overseas. For instance I think work at Johns Hopkins Univers Reiner and in London at the Great Ormand Street Hospital by Mr. Philip Ransley on children born with a condition called cloacal exstrophy will be very informative. H born essentially without any genitals but they do have testes. They are typically castrated and raised as girls and given female hormones to induce a female-like pu "How will they identify as they get older?" Several of these children already have expressed themselves to be boys. Work is progressing by following up cases of int that have had surgery to find out how they have adapted. Did they remain in the gender to which they had been assigned or did they switch to another gender? Th shed light on identity development.

Among transsexuals research is developing from large population and we should soon have good data on the long-term satisfaction and functioning of post-operativ Much of this comes from Charing Cross Hospital in London and the work of Dr. Richard Green.

Work, particularly among Dutch investigators Drs. D. F. Swaab and Louis Gooren and collaborators Frank Kruijver and Jiang-ning Zhou, is looking at the brains of tr attempt to document additional clues as to which areas of the brain might be associated with sexual identity development. Dr. Peggy Cohen-Kittenis, also from the some interesting work with very young and adolescent transsexuals which I think will be revealing and the work at the Clarke Institute in Canada with Drs. Ken Zuc Blanchard is also exciting. I myself am trying to finish a long-term study of people with a condition called the androgen insensitivity syndrome. These are individuals chromosomes and have varying degrees of refractoriness to testosterone. Most appear as females, are reared as females, and live as females. Others are reared as accordingly. Surprisingly, many of these persons switch from their gender of rearing to the opposite gender. We are trying to understand how and why those that r are trying to understand how and why those that change do so. How do they reconcile their gender and sexual identities?

DK: An important aspect of research is that the methodologies recognize differences appropriate to the particular question asked. And that the results might vary a research techniques used.

MD: Exactly. And here too the law sometimes comes into play. We certainly must insure that studies are done with the welfare of the subjects in mind and we are s what we can ask or require of the research subjects.

DK: Right. Does research show any major differences between MtFs and FtMs?

MD: Well, the most obvious finding is that the large majority of transsexuals seem to be male-to-female types. And among them about half are androphilic and hal the female-to-male transsexuals most seem to be gynecophilic. That's just two basic group differences. There are also often other differences in what each group ex transformation.

DK: Yes, there is still a lot to be understood.

In your self-testing paper you offer a lot of promise when you say, "the details of this process of sexual identity formation are still to be elucidated. Nevertheless, it that this inner voice can develop without external reinforcement and social approval for the desired sex and with ample reinforcement in the non-desired sex. And it face of a socially adverse future, yet provide an inner personal calm more important than any external rewards." This statement and the concluding statements in th suggest that, specifically in reference to the transsexual or intersexed person, there needs to be a period of time and other ameliorative efforts made that might we surgical intervention is necessary. You offer hope that there will be an audience to listen to these inner voices. The opportunity to publish this book with people ma personal testaments, about their identity, about their travails, and even selectivity, speaking from a multiplicity of perspectives, also lends hope that someone may individual problem and not just something that's legalistic or whether an HMO or insurance company is going to approve an operation.

MD: I fully agree with that. People have to realize that these changes are not done easily or without a great deal of thought and often anguish. When people talk a conversion, going say from Catholicism to Judaism, or whatever, they think of the mental workings that occur. I think going from female-to-male, or male-to-femal conversion and requires much more psychic effort.

DK: True, probably the most manifest imaginable. Let me ask this...you mentioned research dollars. If someone wanted to donate money for sex research, what ins suggest they contact and how can they designate that money go specifically into a particular area of interest?

MD: If they want it to go to gender research or sexual identity research there are a few specific organizations to which one can donate. The Harry Benjamin Interna Dysphoria Association, for instance, is interested specifically in supporting research on transsexualism. In the United Kingdom there is the GIRES (Gender Informati Education Society) which sponsors research on transsexualism and intersex conditions. Some organizations are slanted more toward political activity and education The Intersex Society of North America is one such organization. There is also an organization that I head at the University of Hawaii called the Pacific Center for Se People can send money to the University of Hawaii Research Foundation for use by PCSS and I'd be happy to put it toward identity and gender research. All contrib deductible, by the way. Another way is for individuals to select researchers they admire and support their research via their host institutions. That way the money i everyone gets a tax break.

DK: Great. Why do you suppose the National Institutes of Health (NIH) has done so little to address these issues?

MD: Candidly, I really don't know how much they have or have not addressed. But often sex related issues are a problem for government agencies to deal with. Th "Look, we need money for AIDS research, or breast cancer and prostate cancer research and identity research has a lower priority." Or, on the other hand, they ca supporting research in sex. Just look at our efforts in AIDS, breast and prostate cancer, and so forth." When you talk to NIH about something like sexual identity, t dealing with a much smaller need and the issue is less politically viable.

DK: I understand there has always been a lot of competition for research dollars, particularly on the university level...it appears as though the bulk of research is n private corporations with a profit motive in mind.

I'd like to switch gears and talk about the article in the November 1995 issue of Nature, titled, "Sex difference in the human brain and its relation to transsexuality about an area of the brain, known as the bed nucleus in the stria terminalis (BSTc).

Referring to an illustration in the article, it says, "Here we show that the volume of the central subdivision of the bed nucleus in the stria terminalis, the BSTc, a bra essential for sexual behavior, is larger in men than in women. A female size BSTc was found in male-to-female transsexuals." It says, "this supports the hypothesis develops as a result of an interaction between the developing brain and sex hormones." Afterward, the article goes on to say, "This led to the hypothesis that sexu the brain might not have followed the line of sexual differentiation of the body as a whole." Sexual orientation was ruled out as a factor affecting the size of the BS studies on both heterosexual and homosexual men and "In addition, there is no difference in BSTc size between early-onset and late-onset transsexuals, indicating size is related to the gender identity alteration per se rather than to the age at which it becomes apparent. The use of feminizing hormones was also ruled out as th they are saying here is that the size of the BSTc in male-to-female transsexuals, an area of the brain responsible for sexual behaviors, corresponds with that of bio these post-mortem studies were done only on male-to-female transsexuals, would it be supposition to suggest that the BSTc size of female-to-male transsexuals re biological males?

MD: Yes, that would be the supposition. Research data on FtMs would be needed to substantiate the thesis.

DK: Your own research seems to follow along the lines of what is contained in the article.

MD: In many ways, yes. We know, for example, in many of the intersex people with whom we have worked, that what happens to their genitals is different than w happened in their brains. Keep in mind we have not done any actual anatomical studies of the brain. But we attempt to evaluate brain differences by people's think behavior patterns. Some years ago, in monkeys, Drs. Robert Goy, Fred Bercovitch, and Mary McBrair showed that they could induce changes in the genitals that we brain (behavioral) changes, and vice versa, they could induce behavioral changes in the brain that were not followed by changes in the genitals. The brain and the g differentiated and develop independently.

DK: That sounds quite conclusive, with some very interesting ramifications.

MD: Well, it's conclusive for monkeys. And I happen to think, with this matter, that we can extrapolate from monkeys to humans. There are others that still have t

DK: I didn't realize that ... So, there are still to come a few surprises in brain and identity development research.

MD: Absolutely! I'm sure there are interesting results yet to be gotten. As we started this discussion, I said that people like to find anatomical differences between brains—they're easier to see and understand than thinking differences. The biggest differences may not be in big structures, like an interstitial nucleus, or a BSTc. I dendrites, or the connections the nerves make. It may be in brain biochemistry. I'm reminded of a joke. A guy sees his friend looking under a lamppost and the co something like this:

"What are you doing?"

"I'm looking for the watch I lost."

"Where'd you lose it?" "

"I lost it down the street."

"Well, why are you looking here?"

"There's better light here."

[Laughter]

MD: That's what happens—we look for big things "where the light is better." But the crucial answers we are looking for may require techniques not yet available or have to look at some different hormones combinations, we may have to look at some biochemical reactions, some genetic thing that we don't know yet.

We're just beginning to peel back the layers of the onion, as it were. And each time we come to a mole on the onion we say "Hey, look at this mole." Well, it may still have to get down to the core of the onion and understand the contribution of all its layers. I do believe there are differences yet to be discovered in the hypoth stria terminalis, and in basal ganglia, in the amygdala in the forebrain and the cortex. Unfortunately we don't yet know how to measure them. When we first came holograms, people began to use those as images and analogies for how the brain works; now people make analogies between the brain and the computer. We mig new ways to conceptualize these complicated workings of the brain. We're still learning... we know a lot about the brain, but we're also ignorant of many things abo

DK: Again, I'd like to ask, do you know of any research currently being conducted around the issue of sexual identity?

MD: Well. I mentioned several studies before. Other studies that come to mind are those of Dr. Dean Hamer who is studying the gene structure, trying to map out that may be associated with sexual orientation, heterosexuality and homosexuality. This is a question associated with transsexuality as it is with non-transsexuals. C should probably be mentioned are the works of Drs. Simon LeVay, Roger Gorski, Mark Breedlove and others. Much of the crucial work is also coming from the stud individuals. Here we have people that, due to endocrine or genetic or other developmental situations, allow a peek into how behavior patterns, sexual orientation an might come together. In addition to those I've mentioned before, the work of Drs. Julianne Imperato-McGinley, Ariel Rosler and Ronny Schtarkshall, Melvin Grumba Schober or Heino Meyer-Bahlburg is important. I think that there are many projects going on. Most of this work doesn't have a direct commercial value so doesn't g measure of support as does something like Viagra. The ethical, scientific and social issues, however, are very important.

DK: Right. I'd like to think lives are viable enough and valuable enough without an economic inducement.

Let me ask you to respond to a question that I imagine one of our readers might ask. We've been discussing the biological implications of transsexuality... Do you t individuals --transsexuals if you will-- who have simply chosen to change their sex for social reasons or any reason not linked to biology?

MD: That's not an unusual question; and it's a good one. I guess anything is possible but, no, I don't think an individual would go through sex reassignment surger just for social reasons unless the stakes were extremely high. And off hand I can not imagine how high that might have to be. Certainly a male might think, if he w oriented, that it could be easier to attract a male if he were attired or built like a woman, but he would have to be willing to accept all the other things that go with that go with transitioning; he must accept the surgery, the stigma and other social and medical features of transsexualism. And the real-life test should convince hi anticipated benefits did not come about. Also, the typical male homosexual or lesbian appreciates his or her genitals and doesn't want to give them up. I don't think the morning and decides they're going to be a transsexual just to attract a certain type partner or live a certain life style. Individuals, I believe, change their gender to their "brain sex." Making the decision to live the life of a transsexual is not a flippant decision.

DK: Mickey, in a recent series of programs called "Brain Sex," aired on the *Discovery Channel*, they talked about the research you mentioned with monkeys and the humans. It is very intriguing that this is getting into the mainstream. It doesn't mean that the general population is suddenly turning on the *Discovery Channel*, but important indicator that some of these issues will become more conscious among the larger populace. I am also impressed with a book by Gary Kelly called *Sexualit Perspective*, which is being used as a college textbook.

These contributions are obviously dependent on the serious efforts of researchers and I would like to personally thank you for the brilliant work you've done and ar As a transsexual, I wish to extend my gratitude, as I believe we are in your debt.

MD: Thank you for those kind words.

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