WHAT HAPPENED AT HOPKINS: THE CREATION OF THE INTERSEX MANAGEMENT PROTOCOLS

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Alison Redick's study, entitled *American History XY: The Medical Treatment of Intersex, 1916-1951* (*American History XY*), argues that the development of intersex treatment protocols constitutes a major shift not only in the practical treatment of the intersex, but also in the broader medical interpretation of "sex."[1] It is widely known and accepted that in 1955, John Money, Joan Hampson, and John Hampson introduced the treatment protocols for intersex conditions, which were subsequently implemented by a team of practitioners at Johns Hopkins University.[2] Redick's study reexamines the series of events that led to the creation of the management protocols, and suggests that this was a pivotal moment in the history of both intersex and gender. While prior to 1955, in cases of indeterminate genitalia, contradictions between primary and secondary sex characteristics and the sex of rearing were accepted as the inevitable outcome of intersex conditions, the Hopkins protocols re-conceptualized intersex as a medical and social emergency. Significantly, during the period from 1916-1955, if a child was born intersexed—with a condition in which hormonal development as male or female is affected in utero, resulting in indeterminate genitalia—doctors would make an approximate sex assignment and then advise parents to wait and see whether contradictions

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[1] Alison Redick, American History XY: The Medical Treatment of Intersex, 1916-1955 (2004) (unpublished Ph.D. thesis, New York University) (on file with the University of Pittsburg Health Sciences Library).

[2] The Hopkins protocols were comprised of five articles, as follows: Joan G. Hampson, *Hermaphroditic Genital Appearance, Rearing, and Eroticism in HyperAdrenocoriticism*, 96 BULL. JOHNS HOPKINS HOSP. 265 (1955); John L. Hampson, Joan G. Hampson & John Money, *The Syndrome of Gonadal Agenesis (Ovarian Agenesis) and Male Chromosomal Pattern in Girls and Women: Psychologic Studies*, 97 BULL. JOHNS HOPKINS HOSP 207 (1955); John Money, Joan G. Hampson & John L. Hampson, *Hermaphroditism: Recommendations Concerning Assignment of Sex, Change of Sex, and Psychologic Management*, 97 BULL. JOHNS HOPKINS HOSP. 284 (1955); John Money, Joan G. Hampson & John L. Hampson, *An Examination of Some Basic Sexual Concepts: The Evidence of Human Hermaphroditism*, 97 BULL. JOHNS HOPKINS HOSP. 301 (1955) [hereinafter *Examination*]; John Money, Joan G. Hampson & John L. Hampson, *Sexual Incongruities and Psychopathology: The Evidence of Human Hermaphroditism*, 98 BULL. JOHNS HOPKINS HOSP. 43 (1956).

indeed arose during puberty. If contradictions emerged—for example, if at puberty a person raised male grew breasts, or female failed to menstruate—*then* medical counsel would be sought. Through a comprehensive analysis of medical case studies published between 1916 and 1955, in *American History XY*, Redick demonstrates the complete absence of medical protocols during this period. According to information culled from over 100 case narratives, she argues that it is evident that intersex was simply dealt with on a case-by-case basis.

John Money, who is frequently identified within critical intersex studies as the architect of contemporary intersex management, conducted the only other comprehensive study of these cases in his Ph.D. dissertation at Harvard University.[3] *American History XY* begins with Money's concluding remarks about "the anarchy of idiosyncrasy" in the psychological and physiological histories of the cases in his study. The Hopkins protocols were written in 1955 to correct and contain the unpredictable manifestations of sex in intersex subjects, which resulted from the lack of consistency in intersex treatment.[4] This article, excerpted from *American History XY,* refers to the period between 1916 and 1955 as the "Era of Idiosyncrasy." The term does not represent a rigid temporal, theoretical or methodological category, instead it is used as a conceptual shorthand for a period in which there were no set standards for treating intersex conditions. The study employs the ethical framework established by intersex activists, who recommend that an approximate sex assignment be made at birth and that any irreversible surgical or hormonal interventions should be postponed until the subject is old enough to consent to such procedures.[5]

Ultimately, the dual objectives of the study are to recover the secret history of medical treatment of intersex during the Era of Idiosyncrasy *and* to serve as a genealogy of the term "gender," which was introduced to the vernacular in 1951 by John Money in his unpublished dissertation.[6] Frustrated by the limits of the terms "sex" and "psychological sex" to designate the manifestations of physical and pyschological difference between masculinity and femininity, John Money resurrected the term "gender" from linguistics to describe the social manifestations of sex. While other histories have regarded "gender" as simply a synonym for the earlier phrase "psychological sex," in *American History XY* Redick posits that "gender" was conceptualized as a mechanism of control and consolidation, and

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[3] John Money, Hermaphroditism: An Inquiry into the Nature of a Human Paradox (1951) (unpublished Ph.D. dissertation, Harvard University) (on file with author). Money actually collected 207 case studies, beginning in the late 19th century. The author collected 106 of these cases, omitting those published prior to 1916 and focusing almost entirely on literature published in U.S. medical and psychiatric journals.

[4] *Id.* at 194 ("there is no uniform cause and effect relationship to be discerned; only the anarchy of idiosyncrasy and uniqueness in the psychological and physiological history").

[5] *See* statements issued by the Intersex Society of North America (ISNA), *available at* http://www.isna.org.

[6] Money, *supra* note 3.

designed to enable medical practitioners to assign and maintain sex in people born with indeterminate genitalia.[7]

As mentioned above, during the Era of Idiosyncrasy, doctors typically made an approximate sex assignment at birth and waited to see whether contradictory sex characteristics emerge during puberty. For this reason, sex reassignments often occurred during adolescence and early adulthood, when gonadal sex was found to contradict the sex of rearing. However, various factors led doctors to disregard gonadal evidence. These included the demands of the family, which were often influenced by religious and community standards, and the perceived psychological sex of the subject. By the mid-1930s, psychological sex—the masculine or feminine behavior of the subject, including sexual orientation—became an increasingly important factor in determining "true sex." Because psychology and libido often conflicted with gonadal sex, practitioners began to increasingly defer to psychological sex in order to avoid a sex reassignment that would produce homosexuality. For example, an intersexed person raised male, who understood himself to be male and was attracted to women, may have sought treatment for a genital anomaly, only to be told that he was in fact female because he had ovaries. Was he a heterosexual man or a lesbian? These types of treatment scenarios, evidenced in the medical literature of the era, began to produce theoretical snags that confounded practitioners and led to a demand for medical standards in intersex treatment.

Although some practitioners began to consider psychological sex in the diagnosis of "true sex," others continued to rely on the gonadal evidence. In the late 1940s and early 1950s, the conflict between psychological and gonadal sex in intersexed subjects triggered heightened anxiety among practitioners. Several doctors published studies that expressed a deep discomfort concerning the possibility of vast social uncertainty caused by contradictory genitals, gonads, and personalities.[8] After all, how could practitioners know whether someone was gay or straight if they could not be certain that the person in question was male or female? The case studies analyzed in *American History XY* point to increased anxiety concerning the lack of standards for intersex treatment, which reached a fever pitch in the late 1940s, and resulted in a push for standardization.

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[7] *See* SUZANNE J. KESSLER, LESSONS FROM THE INTERSEXED 40-44 (1998). *See generally* JOANNE MEYEROWITZ, HOW SEX CHANGED: A HISTORY OF TRANSSEXUALITY IN THE UNITED STATES (2002). Several scholars, including Kessler and Meyerowitz, attribute John Money with the introduction of the term "gender" into the social science lexicon. However, whereas Meyerowitz proposed that "gender" was a synonym for an earlier term "psychological sex," a reading of Money's early theoretical essays indicated otherwise. The significance of Money's theory of gender acquisition may be considered distinct from psychological sex, and because gender enabled practitioners to prescribe a sex to intersex subjects, it was actually a mechanism of control and consolidation.

[8] *See, e.g.*, Frank Hinman, Jr., *Sexual Trends in Female Pseudohermaphrodism,* 11 J CLIN. ENDOCRINOL. METAB. 477 (1951); Frank Hinman, Jr., *Advisability of Surgical Reversal of Sex in Female Pseudohermaphroditism*, 146 J. AM. MED. ASS'N 423 (1951); Frederick S. Howard & Frank Hinman, Jr., *Female Pseudohermaphroditism with Supplementary Phallic Urethra: Report of Two Cases*, 65 J. UROLOGY 439 (1951).

John's Hopkins University had been a nexus for the treatment of intersex subjects since 1916, when Hugh Hampton Young opened the Brady Urological Institute. From 1935 until he retired, Lawson Wilkins, an endocrinologist at Johns Hopkins University Hospital, took a special interest in cases of Congenital Adrenal Hyperplasia (CAH), an intersex condition. When he met John Money in the early 1950s, he realized that Money's work provided the ideal theoretical framework for standardizing intersex treatment. Instead of struggling against the seemingly inevitable conflict between psychological sex and gonadal sex, Money suggested that psychological sex was so deeply engrained that it did not need to correspond with the gonadal sex at all. Money argued that in the vast majority of the 248 cases of hermaphroditism that he surveyed, the sex of rearing, as opposed to gonadal sex, was a much more reliable predictor of psychological sex and sexual orientation. Consequently, Money both dismissed a hormonal theory of homosexuality, which was prevalent at the time, and proposed that intersexed infants should be raised according to the appearance of their external genitalia instead of their gonadal sex. This emphasis on external genitalia effectively shifted the physiological locus of true sex from the gonads to the phallus.[9]

American History XY explores John Money's early theoretical writing in order to situate his theory of gender acquisition within the history of the treatment of hermaphroditism. Redick conducted extensive research in the John Money Collection at the Kinsey Institute, a remarkable resource that includes volumes of his early unpublished manuscripts; essays that Money wrote while completing his master's thesis in New Zealand in the 1940s; study notes from his comprehensive exams at Harvard; an essay on Freudian theory and hermaphroditism; early drafts of his prospectus and dissertation; and an annotated bibliography of the 248 cases that he examined in his dissertation.

Through her close reading of these manuscripts, Redick traces Money's theory of gender through the prevalent debates of psychological theories in the 1940s. In particular, Money conceived his work as being in opposition to the mind-body dualisms embraced in motivation theory and behaviorialism. As Money developed his theory of gender acquisition, he used the metaphor of a feedback system consisting of a three-part process of interactionism. First, the fetus interacted with hormones in utero, which created a gender threshold.[10] Second, the infant interacted with a human environment during a critical period of eighteen months where gender became imprinted "like a native language."[11] Although the imprinting itself was a cultural process, the capacity to learn gender, like language, was a neurological function.[12] Finally, after the critical period

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[9] Suzanne Kessler has written extensively about this topic in a number of her works. *See, e.g.*, KESSLER, *supra* note 7, at 40-44. *See also* ANNE FAUSTO-STERLING, SEXING THE BODY: GENDER POLITICS AND THE CONSTRUCTION OF SEXUALITY 56-63 (2000) (discussing at length the implications of phallus size as the yardstick for sex assignments).

[10] *Examination*, *supra* note 2, at 310.

[11] *Id.*

[12] *Id.*

during which gender was imprinted, the child interacted with an environment that continued to reinforce a gender role.[13]

Redick points to this particular breakdown of Money's theory of gender as a means of countering the popular misconception that the Hopkins protocols were based on a purely culturalist understanding of gender development. Rather, Money believed that "gender"—a term that he brought into circulation to distinguish social from biological aspects of sex—was the product of a complex series of interactions between subjects and their environment. Yet, according to his theory, human psychology would still assume an either masculine or feminine gender orientation. When Money stumbled across an instance of indeterminate sex in a clinical seminar, he recognized hermaphroditism as the perfect test case for his theory of gender.

What Money found in his research was that intersexed subjects in a large majority of cases conformed to the sex of rearing despite physiological contradictions. Based on this evidence, Money refuted the gonadal standard for making sex assignments. He considered cases that resisted the sex of rearing as the "anarchy of idiosyncrasy," which he ultimately linked back to the evidence of contradiction between gonadal sex and sexual orientation. Of the forty cases where subjects opted to change sex in adulthood, thirty-nine had been raised female, and most had phalluses. According to the phallic standard, hypertrophied clitorises and microphalluses should be amputated to prevent gender confusion. The protocols were built on the notion that perfect genders could be achieved in intersex subjects as long as all evidence of contradiction was eliminated.

Money worked at Johns Hopkins under the tutelage of Lawson Wilkins, whom, as earlier noted, was a pediatric endocrinologist specializing in treating congenital adrenal hyperplasia (CAH). The early 1950s were a heady time at Hopkins, and continued to be a nexus for intersex subjects. Wilkins had just conclusively developed cortisone treatments to suppress virilization in CAH.[14] Furthermore, a geneticist named Murray Barr found that a test of chromatins in skin samples could conclusively determine chromosomal sex.[15] At approximately the same time, Money's theory of gender acquisition, based on his study of hermaphrodites, stated that as long as sex assignment was made prior to the age of

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[13] *Id.*

> One may liken the establishment of a gender role through encounters and transactions to the establishment of a native language. Once imprinted, a person's native language may fall into disuse and by supplanted by another, but it is never entirely eradicated. So also a gender role may be changed or, resembling native bilingualism, may be ambiguous, but it may also become so indelibly engraved that not even flagrant contradictions of body functioning and morphology may displace it.

Id.

[14] Lawson Wilkins et al., *Treatment of Congenital Adrenal Hyperplasia with Cortisone*, 11 J. CLIN. ENDOCRINOL. METAB. 1 (1951). Congenital adrenal hyperplasia (CAH) is a genetic defect affecting the adrenal gland.

[15] Keith L. Moore, Margaret A. Graham & Murray L. Barr, *The Detection of Chromosomal Sex in Hermaphrodites from a Skin Biopsy*, 93 SURGERY, GYNECOLOGY AND OBSTETRICS 641 (1953).

eighteen months, chromosomal sex and hormonal sex were incidental. While the chromatin test and cortisone treatments enabled the Hopkins team to predict and correct several varieties of hermaphroditism with unprecedented accuracy, it was Money's work that provided the theoretical apparatus to prevent the contradictions that often arose when intersex conditions were treated during adolescence.

Almost completely absent from secondary source literature documenting the history of the contemporary medical protocols is the importance of Wilkins' involvement in its development. Although the protocols and their effects are usually attributed to the work of John Money, the research in *American History XY* argues that Lawson Wilkins was the prime architect of the first contemporary intersex management team, brought together by Wilkins at the Johns Hopkins School of Medicine in 1952. Accounts from Money's autobiography showed that Money and Wilkins had a meeting of the minds when they met in 1951, and Wilkins subsequently lured Money from a tenure-track position at Bryn Mawr to a postdoctoral fellowship at Johns Hopkins.[16] Prior to being offered a postdoctoral fellowship by Wilkins at Johns Hopkins University, Money had been working with Dr. Frederick Bartter in Boston, who was in competition with Wilkins to publish findings concerning the effects of cortisone on infants with CAH. In the end, it was Wilkins who brought together the group of surgical and psychological experts that began to standardize intersex treatment. Because Money was a psychologist and not a medical doctor, he was appointed to the Department of Psychiatry, where he worked with senior psychological scholars Joan and John Hampson, consultants and observers in Wilkins' Endocrine Clinic.

The intersex management protocols hinged on Money's theory of gender. Although he published the protocol essays with Joan and John Hampson, his archives indicate that it was Money who wrote the protocols.[17] In the five essays published in the Bulletin of the Johns Hopkins Hospital, Money explicitly stated that there are seven variables of sex:

1. assigned sex, or the sex according to which an intersex subject would be reared;
2. sex based on external genitals, especially the size of the phallus/clitoris;
3. sex based on internal reproductive structures, such as the presence of fallopian tubes or undescended testicles;
4. hormonal sex, which refer to the relative levels of testosterone and estrogens;
5. gonadal sex, or whether the subject had ovaries or testicles;
6. chromosomal sex, for which a reliable test had been developed in 1951;

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[16] Wilkins' initial interest in Money may have been a result of what Money characterized as the "friendly competition" between Wilkins and Bartter, but there was no verification of that in interviews with several doctors who participated in Wilkins' management team.

[17] *See supra* note 2.

7. gender role, or whether the subject identifies with being a man or woman, or a boy or girl.[18]

According to Money's theory of gender, there should be a seamless conflux of all seven variables of sex. Significantly, this taxonomy, although completely contrived, was almost immediately implemented into the medical literature on the treatment of intersex. For example, the 1957 textbook *Hermaphroditism, Genital Anomalies, and Related Endocrine Disorders*, co-written by two of the surgeons on Wilkins' new management team, replaced Hugh Hampton Young's 1938 treatise on hermaphroditism as the new handbook for the surgical correction of intersex conditions.[19] The 1957 textbook included large portions of Money's writing about the seven variables of sex, especially his freshly minted and rapidly circulating theory of gender role.

In *American History XY* Redick examines the evolving paradigm of the medical treatment of intersex between 1916 and 1955, and argues that the shifts that took place during this period reflected changes in both the medical and cultural understanding of knowledge about sex and sexuality. In the late 1940s, heightened anxiety about homosexuality, resulting from both the increased medicalization of psychiatry and growing visibility of gay communities during and after World War II, raised questions among practitioners about the soundness of the gonadal standard.

Reassigning sex according to gonadal sex during adolescence often resulted in significant contradictions between true sex and the sex of rearing. Compounded by the prevalence of a hormonal theory of homosexuality, the conflict between physiology and psychology in intersex subjects carried with it the distinct threat of homosexuality. The intersex treatment protocols may be interpreted as an outgrowth of the Cold War principle of containment, a metaphor deriving from epidemiology. Treatment prescribed early intervention and careful management of intersex conditions as a preventative solution to unpredictable outcomes in gender and sexuality. That the protocols ultimately failed to do so demonstrates that sex and gender are never easily contained, and have a tendency to seep outside of the contrived boundaries of Money's seven variables of sex.

Ultimately, in her study, Redick concludes that the Hopkins protocols were built on a faulty premise. Money's theory of gender and its subsequent implementation into medical practice attempted to stabilize the gender difference inherent in intersex conditions, but it failed to recognize that sex and gender have always exceeded the bounds of a binary system. The paradox of gender dictates that we must exist within a binary system that distorts us and constrains us. While the irony of intersex management is that intersex conditions are in themselves potential evidence that biological sex "naturally" exceeds two sexes, the tragedy is apparent in the costs of suppressing this evidence of excess, which often takes the

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[18] *Id.*

[19] HOWARD W. JONES, JR. & WILLIAM WALLACE SCOTT, HERMAPHRODITISM, GENITAL ANOMALIES, AND RELATED ENDOCRINE DISORDERS (1958).

form of nonconsensual surgery in infancy and early childhood. The intersex management protocols are contingent on a dangerously normative conception of gender, according to which people should always conform to a masculine or feminine ideal. Take away the ideal, and the whole enterprise falls apart.