

Glandular Politics

Experimental Biology, Clinical Medicine, and Homosexual Emancipation in Fin-de-Siècle Central Europe

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ABSTRACT

Focusing on the work of the physiologist Eugen Steinach and the clinician and activist Magnus Hirschfeld, this essay explores the complex interplay of experimental biology and medical discourse in the construction of a male homosexual identity in early twentieth-century Central Europe. Hirschfeld's collaboration with Steinach, the essay demonstrates, was not simply an instance of the imposition of a biomedical model of sexuality on the homosexual community by a hegemonic medical profession. Hirschfeld, a physician who was also a leader of the German movement for homosexual emancipation, used Steinach's theory to anchor a new biological model of homosexuality, claiming that male homosexuals were neither diseased nor depraved but formed a distinct, autonomous group of organically feminized men. The redefinition of homosexuality resulting from Steinach's and Hirschfeld's research, the essay argues, was not related exclusively to the specific politics of homosexual emancipation but also to more general debates, anxieties, and contestations over the cultural meanings of masculinity and femininity.

“THE NINETEENTH-CENTURY HOMOSEXUAL became,” in the words of Michel Foucault, “a personage, a past, a case history, and a childhood, in addition to being a type of life, a life form, and a morphology, with an indiscreet anatomy and possibly a mysterious physiology.” Pursued most actively in the German-speaking lands, this medi-

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calization of homosexuality was concerned almost exclusively with male homosexuals.¹ During roughly the same period, many activists, particularly in Central Europe, began to demand the decriminalization of homosexual acts and the social emancipation of homosexuals. The political discourse of the emancipationists drew upon and influenced medical theories that homosexuality was a congenital anomaly and, therefore, neither a crime nor a disease.²

Science, it should be emphasized, was by no means all that the emancipationists drew upon, and not all emancipationists considered scientific theories of homosexuality to be of any worth. Any complete history of Central European homosexual movements would have to take such differences into account and, at the same time, situate homosexual emancipation in the context of the numerous sexual and lifestyle reform movements of the early twentieth century—and of their conservative opponents. The voices of physicians, in such a complete account, would compete for attention with those of their homosexual “patients,” legal and medicolegal professionals, groups crusading for moral purity, and educated members of the laity, all of whom frequently held radically different opinions on the homosexual question.

Such tasks, however, lie far beyond the scope of this essay. Focusing only on one prominent leader of the emancipationist movement, the Berlin physician Magnus Hirschfeld, I analyze his political deployment of one kind of biological argument to construct one particular concept of homosexual behavior and of the homosexual body. My primary objective is to show how—and, more important, why—Hirschfeld’s clinical and descriptive theory of homosexuality and the physiologist Eugen Steinach’s experimental findings on sex-gland function reinforced, validated, and utilized each other within the larger context of homosexual rights movements in early twentieth-century Central Europe.³ The essay is concerned only with the motives, mechanics, and contexts of this specific interaction: the important question of how it was seen, used, encouraged, or repudiated by

¹ Michel Foucault, *The History of Sexuality*, trans. Robert Hurley, 3 vols., Vol. 1: *An Introduction* (New York: Vintage, 1978), p. 43. See also John Lauritsen and David Thorstad, *The Early Homosexual Rights Movement (1864–1935)* (New York: Times Change Press, 1974); James D. Steakley, *The Homosexual Emancipation Movement in Germany* (New York: Arno, 1975); Hans-Georg Stümke and Rudi Finkler, *Rosa Winkel, Rosa Listen: Homosexuelle und “Gesundes Volksempfinden” von Auschwitz bis heute* (Reinbek bei Hamburg: Rowohlt, 1981), pp. 16–66; and John C. Fout, “Sexual Politics in Wilhelmine Germany: The Male Gender Crisis, Moral Purity, and Homophobia,” *Journal of the History of Sexuality*, 1992, 2:388–421. On the history of biomedical research on homosexuality see Rainer Herrn, “On the History of Biological Theories of Homosexuality,” in *Sex, Cells, and Same-Sex Desire: The Biology of Sexual Preference*, ed. John P. De Cecco and David Allen Parker (New York: Haworth, 1995), pp. 31–56; Rüdiger Lautmann, ed., *Homosexualität: Handbuch der Theorie- und Forschungsgeschichte* (Frankfurt am Main: Campus, 1993); and the essays in Vernon A. Rosario, ed., *Science and Homosexualities* (London: Routledge, 1997).

² What I, for the sake of convenience and relative euphony, call “homosexuality” was indeed referred to as “*Homosexualität*” by many German physicians of the early twentieth century, including the two chief protagonists of my story. In their usage, however, the word indicated not simply the phenomenon of same-sex attraction but also the theoretical conviction that homosexual desire was an indication of psychological and biological gender transposition: the male homosexual was psychosexually female or at least feminized. In contemporary English texts, such as those of Havelock Ellis, the designation “sexual inversion” reflected the conceptual reality more clearly, as did the older German term “*konträre Sexualempfindung*” (“contrary sexual feeling”). For a succinct discussion see Havelock Ellis, *Studies in the Psychology of Sex*, 2 vols., Vol. 1, Pt. 4: *Sexual Inversion* (New York: Random House, 1936) (hereafter cited as **Ellis, *Sexual Inversion***), pp. 310–317.

³ This episode has been superficially described in Nelly Oudshoorn, *Beyond the Natural Body: An Archeology of Sex Hormones* (London: Routledge, 1994), pp. 56–57; and in Herrn, “History of Biological Theories of Homosexuality” (cit. n. 1). Both accounts derive all their facts from Gunter Schmidt, “Allies and Persecutors: Science and Medicine in the Homosexuality Issue,” *Journal of Homosexuality*, 1984, 3–4:127–140, a pioneering but inadequately contextualized analysis.



Figure 1. *Magnus Hirschfeld.* (Courtesy of Magnus-Hirschfeld-Gesellschaft, Berlin.)

homosexual “patients” and activists and their supporters and opponents must be left for future exploration.

MAGNUS HIRSCHFELD AND THE BIOLOGY OF EMANCIPATION

Magnus Hirschfeld (1868–1935) was a practicing physician in Charlottenburg, Berlin, and the founder of the Institute for Sexual Science, a privately run institution dedicated to research on all aspects of human sexuality, male homosexuality in particular. From 1896 until the outbreak of World War I, Hirschfeld published extensively and almost exclusively on homosexuality and appeared frequently in court as an expert witness. (See Figure 1.) As a clinical researcher, he interviewed and examined numerous homosexuals: his works, crammed with case histories, statistics, and, occasionally, photographs, spoke the language of empirical science. Describing his knowledge of homosexuality as “unequaled,” the British sexologist Havelock Ellis hailed Hirschfeld’s 1914 treatise *Die Homosexualität des Mannes und des Weibes* [*Homosexuality in Man and Woman*] as “not only the largest but

the most precise, detailed, and comprehensive . . . work which has yet appeared on the subject.”⁴

Hirschfeld, however, was not simply a physician and researcher. From his days in medical school, he had aspired to use science to end legal and cultural discrimination against homosexuals. A great admirer of the biologist Ernst Haeckel, he believed fervently that only a society guided by scientific principles could be truly progressive and just. In 1897 he and some of his associates established the Scientific-Humanitarian Committee, which demanded equal rights for homosexuals with an intensity, consistency, and tenacity unmatched by other groups, whether prohomosexual or antihomosexual, concerning themselves with the issue. The committee, which included representatives from a variety of professions, was guided by a scientific philosophy reflected in its motto: “Justice through science.” It petitioned the Reichstag repeatedly for a repeal of Paragraph 175, the German statute on sodomy; held lectures and public meetings to disseminate “scientific” information on homosexuality; and published the *Jahrbuch für Sexuelle Zwischenstufen* [*Yearbook for Sexually Intermediate Forms*] from 1899 until inflation killed it in 1923.⁵ The committee’s demands for the repeal of Paragraph 175 and, generally, an end to discrimination against homosexuals emphasized many practical issues: to legalize adult consensual same-sex intercourse, for example, would do away with the flourishing trade in blackmail among male prostitutes. Despite its stress on such points, however, the central motif of the committee’s argument was explicitly biological. Its very first petition to the Reichstag, which was composed by Hirschfeld and submitted in 1897, asserted that recent scientific research had determined that homosexuality was neither a disease nor a vice but the consequence of a simple developmental error. No legal or moral guilt could attach to so involuntary a condition. To appreciate the historical importance of this argument, we need to examine the explanations of homosexuality it sought to replace.⁶

TRANSFORMATIONS OF HOMOSEXUALITY AT THE TURN OF THE CENTURY: FROM DEGENERATION TO DEVELOPMENTAL ERROR

Late nineteenth-century physicians had regarded homosexuality as the manifestation of neuropsychopathic degeneration, a protean and vaguely conceptualized pathological condition of the central nervous system causing diverse behavioral as well as physical abnormalities. The concept of degeneration was originally a quasi-theological hypothesis, proposed by the French alienist Benedict-Augustin Morel (1809–1873) in 1857, that explained

⁴ Ellis, *Sexual Inversion*, p. 73. On Hirschfeld see Manfred Herzer, *Magnus Hirschfeld: Leben und Werk eines jüdischen, schwulen und sozialistischen Sexologen* (Frankfurt: Campus, 1992); and James D. Steakley, “*Per scientiam ad justitiam*: Magnus Hirschfeld and the Sexual Politics of Innate Homosexuality,” in *Science and Homosexualities*, ed. Rosario (cit. n. 1), pp. 133–154. On Hirschfeld’s positivistic approach to sexual issues see Ralf Seidel, “Sexologie als positive Wissenschaft und sozialer Anspruch: Zur Sexualmorphologie von Magnus Hirschfeld” (Inaugural-Diss., Univ. Munich, 1969).

⁵ See Steakley, *Homosexual Emancipation Movement in Germany* (cit. n. 1); Lauritsen and Thorstad, *Early Homosexual Rights Movement* (cit. n. 1); Fout, “Sexual Politics in Wilhelmine Germany” (cit. n. 1); and Herzer, *Magnus Hirschfeld*. On the history of Paragraph 175 see Stümke and Finkler, *Rosa Winkel* (cit. n. 1), pp. 39–48.

⁶ See the “Petition an die gesetzgebenden Körperschaften des deutschen Reiches behufs Abänderung des §175 des R.-Str.-G. B. und die sich daran anschließenden Reichstags-Verhandlungen,” composed by Hirschfeld and signed by the members and numerous supporters of the Scientific-Humanitarian Committee, in *Jahrbuch für Sexuelle Zwischenstufen*, 1899, 1:239–266. On medical theories of homosexuality see Frank J. Sulloway, *Freud, Biologist of the Mind: Beyond the Psychoanalytic Legend* (New York: Basic, 1979), pp. 277–319; and David F. Greenberg, *The Construction of Homosexuality* (Chicago: Univ. Chicago Press, 1988), pp. 397–433.

numerous pathological conditions and deviant phenomena as variations from an Adamic “type primitif.” The concept of degeneration was useful precisely because of its vagueness: it allowed physicians to regard diverse constellations of physical and mental symptoms as expressions of one underlying pathological condition, which it was apparently unnecessary to define with any great clarity.⁷ Alcoholism, tuberculosis, and homosexuality, for example, were all signs of underlying degeneration. So were cleft lips, misshapen ears, and unretractable foreskins. For Morel, all of these signified variations from a primordial norm that he did not delineate. His compatriot Valentin Magnan (1835–1912), however, argued that instead of falling from some perfect state, the degenerate actually deviated from the straight and narrow path of evolutionary ascent followed by the rest of the species. This deviation was hereditary and widened progressively over generations until the last member of the tainted line was killed off by the sheer burden of accumulated pathology. The mentally ill and the sexual “perverts” were degenerates par excellence.⁸

In one of the earliest and most influential medical attempts to explain homosexuality, Carl Friedrich Otto Westphal (1833–1890), professor of psychiatry at Berlin, defined it as the symptom of an inherited pathological state of the nervous or the psychic sphere, without actually using the term “degeneration.” That short step was taken in 1877 by the psychiatrist and forensic specialist Richard von Krafft-Ebing (1840–1902). The future author of the *Psychopathia Sexualis*, that grand nineteenth-century encyclopedia of perversions, identified Westphal’s “inherited pathological state” as the degeneration of the central nervous system and homosexuality and other perversions as its “functional signs.”⁹

Although degeneration itself was believed to be hereditary, the specific disorders it caused were not necessarily so. The offspring of homosexuals, for instance, were inevitably marked by more or less subtle stigmata of degeneration, but it was never assumed that all of them were destined to be homosexually oriented. Anybody with a degenerate nervous system, on the other hand, could *acquire* homosexuality, especially if seduced in adolescence. Homosexuality, therefore, could spread almost like an infectious disease: apart from

⁷ On degeneration in general see Ian Dowbiggin, “Degeneration and Hereditarianism in French Mental Medicine, 1840–90: Psychiatric Theory as Ideological Adaptation,” in *The Anatomy of Madness: Essays in the History of Psychiatry*, ed. W. F. Bynum, Roy Porter, and Michael Shepherd, 3 vols. (London: Tavistock, 1985–1988), Vol. 1, pp. 188–232; Annemarie Wettley, “Zur Problemgeschichte der ‘Dégénérescence,’” *Sudhoffs Archiv*, 1959, 43:193–212; and the essays in J. Edward Chamberlin and Sander L. Gilman, eds., *Degeneration: The Dark Side of Progress* (New York: Columbia Univ. Press, 1985). On the utility of vagueness in the concept of degeneration see Françoise Castel, “Dégénérescence et structures: Réflexions méthodologiques à propos de l’oeuvre de Magnan,” *Annales Médico-Psychologiques*, 1967, 125:521–536.

⁸ On degenerationism in nineteenth-century sexology see Annemarie Wettley and Werner Leibbrand, *Von der ‘Psychopathia sexualis’ zur Sexualwissenschaft* (Stuttgart: Enke, 1959), pp. 45–55; and on its sociocultural contexts see Daniel Pick, *Faces of Degeneration: A European Disorder, c. 1848–c. 1918* (Cambridge: Cambridge Univ. Press, 1989).

⁹ C. F. O. Westphal, “Die conträre Sexualempfindung: Symptom eines neuropathischen (psychopathischen) Zustandes,” *Archiv für Psychiatrie und Nervenkrankheiten*, 1869, 2:73–108, on p. 107; Richard von Krafft-Ebing, *Psychopathia Sexualis: A Medico-Forensic Study*, 12th ed., trans. anon. (New York: Pioneer, 1939), pp. 245–246; and Krafft-Ebing, “Ueber gewisse Anomalien des Geschlechtstrieb und die klinisch-forensische Verwerthung derselben als eines wahrscheinlich functionellen Degenerationszeichens des centralen Nerven-Systems,” *Arch. Psychiat. Nervenkrankh.*, 1877, 7:291–312, on pp. 305–312. “Functional” was, of course, opposed to the standard “physical” stigmata of degeneration, such as cleft lips or misshapen ears. On the medical, juridical, and cultural importance of Krafft-Ebing’s work see Wettley and Leibbrand, *Von der ‘Psychopathia sexualis,’* pp. 55–65; Renate Hauser, “Sexuality, Neurasthenia, and the Law: Richard von Krafft-Ebing (1840–1902)” (Ph.D. diss., Univ. College London, 1992); and Harry Oosterhuis, “Richard von Krafft-Ebing’s ‘Step-Children of Nature’: Psychiatry and the Making of Homosexual Identity,” in *Science and Homosexualities*, ed. Rosario (cit. n. 1), pp. 67–88.

trying to free the individual homosexual of his perverted desires, the physician had to prevent the transmission of the perversion to innocent youths.¹⁰

Individual theorists differed on the importance accorded to heredity and environment in the genesis of homosexuality, but even the staunchest “environmentalist” accepted that it could not be acquired in the absence of some degree of constitutional predisposition.¹¹ The specific term for that predisposition varied widely, but the notion itself did not. Conversely, physicians who claimed that homosexuality was entirely innate did not deny that homosexual behavior could be learned or resorted to in exceptional circumstances: two oft-cited examples were men in prison and boys in boarding school who were driven to sodomy because of the unavailability of women but behaved heterosexually as soon as they were released from their single-sex environments. Such sodomitic “acts,” however, did not constitute a “perversion.” For the Berlin sexologist Iwan Bloch (1872–1922), isolated homosexual acts signified “pseudohomosexuality,” whereas true homosexuality was inborn and wholly integral to the personality. Magnus Hirschfeld accepted and popularized this distinction, basing his whole political crusade on the conviction that homosexuality was an innate condition that grew out of and in turn molded one’s very being.¹²

What was innate, of course, could still be a disease—or at least a sign of disease. (Degeneration, after all, was inborn too.) With regard to homosexuality, however, the idea of disease was displaced—slowly and partially, rather than in a blindingly Kuhnian paradigm shift—by the hypothesis that sexual orientation was the outcome of embryonic development (although postnatal development, as we shall see, was not necessarily excluded) and, therefore, liable to developmental errors. This was far from a straightforward depathologization of homosexuality: although the condition was no longer seen as a disease like, say, hysteria, it remained an anomaly comparable to cleft palate.¹³

The degenerationist conception of homosexuality had been sustained by unitary notions of normality and etiology. Each sex had one specific psychosexual personality corresponding to its anatomy. The possession of male genitalia entailed the desire for intercourse with females: any aberration from this norm was pathological and could be explained, regardless of the nature or the degree of its manifestation, by one pathological mechanism.¹⁴ The

¹⁰ See Wettley and Leibbrand, *Von der “Psychopathia sexualis”*; Krafft-Ebing, “Gewisse Anomalien”; and J.-M. Charcot and Valentin Magnan, “Inversion du sens génital,” *Archives de Neurologie*, 1882, 3:53–60, 4:296–322.

¹¹ The psychologist Alfred Binet (1857–1911) traced the “perversions” (especially the one he christened fetishism) to early childhood experiences. But even Binet conceded that a generalized predisposition to perversion (as opposed to the specific perversion itself) could well be inherited. See Alfred Binet, “Le fétichisme dans l’amour,” *Revue Philosophique*, 1887, 24:143–167, 252–274, on pp. 153, 164–167. The German psychiatrists Albert von Schrenck-Notzing (1862–1929) and Emil Kraepelin (1856–1926) propounded similar theories. See Albert von Schrenck-Notzing, *Die Suggestionstherapie bei krankhaften Erscheinungen des Geschlechtssinnes* (Stuttgart: Enke, 1892), pp. 150, 157–159, 193; Emil Kraepelin, *Psychiatrie: Ein kurzes Lehrbuch für Studierende und Ärzte*, 8th ed., 4 vols. (Leipzig: Barth, 1909–1915), Vol. 4, pp. 1952–1960; and Kraepelin, “Geschlechtliche Verirrungen und Volksvermehrung,” *Münchener Medizinische Wochenschrift*, 1918, 65:117–120.

¹² See Iwan Bloch, *Das Sexualleben unserer Zeit in seinen Beziehungen zur modernen Kultur* (Berlin: Marcus, 1907), pp. 590–591; Magnus Hirschfeld, *Die Homosexualität des Mannes und des Weibes*, 2nd ed. (Berlin: Marcus, 1920) (hereafter cited as **Hirschfeld, Homosexualität**), pp. 187, 193–194; and Hirschfeld, “Die Ursachen und Wesen des Uranismus,” *Jahrb. Sex. Zwischenst.*, 1903, 5:1–193, on p. 5. Hirschfeld also constructed a separate category of “bisexuality”: a pseudohomosexual was simply capable of being sexually potent with members of his own sex, while the true bisexual possessed an inner sexual drive directed toward both sexes. See Hirschfeld, *Homosexualität*, pp. 199–200.

¹³ If all one wished to understand was *how* homosexuality arose, the developmental theory was sufficient; but if one aimed to identify the cause of the developmental disturbance itself, degeneration (or one of its conceptual variants such as hereditary predisposition) was still a suitable candidate.

¹⁴ See Krafft-Ebing, *Psychopathia Sexualis*, 12th ed. (cit. n. 9), pp. 245–246.

newer views, while not denying that heterosexuality was the normal sexual orientation, argued that the possession of one set of genitals did not *necessarily* entail the possession of a particular sexual orientation. The development of the genitals and that of the psyche could, in other words, lead to different outcomes, although the processes of genital and psychic development were seen as essentially similar. These developmental theories were analogical constructs with little or no empirical basis, explaining the mysterious course of psychosexual development with reference to the better-understood process of embryonic development of genitalia.

Embryologists of the time believed that human genitals developed in embryonic life from a sexually undifferentiated rudiment into distinct male or female forms. Evolutionary biologists pointed out that such an ontogeny faithfully reflected the phylogenetic descent of the human species from hermaphroditic ancestors. It was well known, of course, that the ontogenetic process did break down occasionally, leading to the birth of a hermaphrodite. Developmental theories of homosexuality claimed that what was possible for the genitalia could also be possible for the brain and the psyche.¹⁵ Owing to an error of development, a human embryo might develop male genitals but, to use the words of the American physician James Kiernan, a “femininely functioning brain.” The German classicist, lawyer, and homosexual activist Karl Heinrich Ulrichs (1825–1895) had argued similarly long ago. His theory, based on Platonic philosophy as well as on contemporary embryology, had culminated in the famous dictum that the male homosexual represented “a female soul in a male body.” European physicians had always accepted this formulation without necessarily endorsing Ulrichs’s theory that male homosexuality was brought about not by vice or disease but by the body developing in a masculine direction and the soul in a feminine one.¹⁶ Once the concept had been reformulated in neurological (female brain, rather than female soul) and biological (ontogeny/phylogeny) terminology during the late nineteenth century, however, most physicians began to regard the developmental hypothesis of homosexuality with great favor.¹⁷ As fervent an upholder of degenerationism as Richard von Krafft-Ebing eventually came to agree that the developmental hypothesis was of significant heuristic value in investigating the genesis of homosexuality.¹⁸

¹⁵ See Sulloway, *Freud* (cit. n. 6), pp. 290–296. On the new developmental theories of sexuality see *ibid.*, pp. 277–319; and Stephen Jay Gould, *Ontogeny and Phylogeny* (Cambridge, Mass.: Harvard Univ. Press, 1977).

¹⁶ J. G. Kiernan, “Sexual Perversion and the Whitechapel Murders,” *Medical Standard*, 1888, 4:129–130, on p. 130; and G. F. Lydston, “A Lecture on Sexual Perversion, Satyriasis, and Nymphomania,” in *Addresses and Essays*, 2nd ed. (Louisville, Ky: Renz & Henry, 1892), pp. 243–264, on p. 247. For Ulrichs’s earlier view see K. H. Ulrichs, *Memnon*, p. 184, and Ulrichs, *Formatrix*, pp. 62–78, both in Ulrichs, *Forschungen über das Rätsel der mann männliche Liebe* (Leipzig: Spohr, 1898; rpt., New York: Arno, 1975); and Ulrichs, “Vier Briefe von Karl Heinrich Ulrichs (Numa Numantius) an seine Verwandten,” *Jahrb. Sex. Zwischenst.*, 1899, 1:36–70, on pp. 64–69. On Ulrichs see Hubert Kennedy, *Ulrichs: The Life and Work of Karl Heinrich Ulrichs, Pioneer of the Modern Gay Movement* (Boston: Alyson, 1988). For acceptance of Ulrichs’s formulation see, e.g., Westphal, “Conträre Sexualempfindung” (cit. n. 9), pp. 92–94; and Richard von Krafft-Ebing, *Psychopathia Sexualis*, 1st ed. (Stuttgart: Enke, 1886), p. 58.

¹⁷ An important exception was Sigmund Freud, who argued that sexual object choice was not necessarily congruous with one’s biological sexual characters and dismissed the equation of male homosexuality with psychological femininity as simplistic. See Sigmund Freud, “The Psychogenesis of a Case of Homosexuality in a Woman” (1920), in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. James Strachey et al., 24 vols., Vol. 18 (London: Hogarth, 1955), pp. 145–176, on p. 170.

¹⁸ In the year before his death Krafft-Ebing declared that homosexuality, “in and of itself,” was neither a disease nor a degeneration. He did not, however, explicitly reject degenerate heredity as the ultimate cause of the developmental error leading to homosexuality. See Richard von Krafft-Ebing, “Neue Studien auf dem Gebiete der Homosexualität,” *Jahrb. Sex. Zwischenst.*, 1901, 3:1–36, on pp. 5–7; and Wettley and Leibbrand, *Von der “Psychopathia sexualis”* (cit. n. 8), pp. 67, 96.

THE HOMOSEXUAL AS HERMAPHRODITE: BODY, MIND, AND GENDER

Unsurprisingly, Magnus Hirschfeld and the activists of the Scientific-Humanitarian Committee seized upon the developmental hypothesis of homosexuality with great enthusiasm—but with one crucial modification. Hirschfeld denied that the developmental error in homosexuality led to the feminization of the psyche alone. While acknowledging that the male homosexual almost invariably possessed normal genitalia, Hirschfeld pointed out that the rest of his body was neither clearly male nor clearly female. It was, rather, a harmonious fusion of the two. In 1903 he declared: “Of the fifteen hundred homosexuals that I have seen, each was physically and mentally distinct from a complete male.”¹⁹ Hirschfeld, in short, regarded homosexuality as a morphological but nongenital form of hermaphroditism.

A different kind of hermaphroditism had, of course, been implicit in previous theories of homosexuality. This hermaphroditism was constituted by the incongruity between the brain and the genitals: the genitalia belonged to one sex and the brain to the other.²⁰ Borrowing the terminology of the philosopher Eduard von Hartmann (1842–1906), the sexologist Albert Moll had described the homosexual as a “body-mind hermaphrodite” (*Leibseelezwitter*). It was the coexistence of male genitalia and a female psychosexual personality in a single organism that constituted the hermaphroditic phenomenon.²¹ The concept, clearly, was grounded in the notions that a person with testicular tissue anywhere in his body was male and that masculinity, regardless of the appearance of the external genitalia, entailed sexual attraction toward females. A male pseudohermaphrodite, who had seemingly female external genitals but possessed testicular tissue somewhere in his body, was thus expected to be sexually oriented only toward women. Desire, in other words, could only be heterosexual.

The noted turn-of-the-century specialist on hermaphroditism, Franz Ludwig von Neugebauer (1856–1914), had been suggesting for some years, however, that the situation might not be that simple. Many male pseudohermaphrodites that he had seen—and no contemporary physician could claim to have seen more of them than von Neugebauer!—considered themselves to be women and wished to marry men. This lack of correspondence between glandular sex and psychosexual orientation challenged the assumption of clinical sexologists that there was no association between pseudohermaphroditism and homosexuality. Magnus Hirschfeld, in any case, had never had much patience for the traditional distinction between hermaphroditism and homosexuality. Convinced that male homosex-

¹⁹ Hirschfeld, “Ursachen und Wesen des Uranismus” (cit. n. 12), pp. 79–86.

²⁰ Pseudohermaphrodites, Krafft-Ebing had claimed, were not homosexual, and genital hermaphroditism had never been observed in homosexuals. See Krafft-Ebing, *Psychopathia Sexualis*, 12th ed. (cit. n. 9), pp. 347–348. Generalized feminization or masculinization of the body (with the exception of the genitals) was possible, but only in a rare, advanced stage of homosexuality, which Krafft-Ebing designated as “androgyny” (*ibid.*, pp. 389–394).

²¹ See Albert Moll, *Untersuchungen über die Libido sexualis* (Berlin: Fischer’s Medicinische Buchhandlung, 1898), p. 477; and Eduard von Hartmann, *Ausgewählte Werke*, 4 vols., Vol. 4: *Philosophie des Schönen* (Leipzig: Haacke, 1887), pp. 237–238. Contrary to Michel Foucault’s lyrical claim that “homosexuality appeared as one of the forms of sexuality when it was transposed from the practice of sodomy onto a kind of interior androgyny, a hermaphroditism of the soul” (Foucault, *History of Sexuality*, trans. Hurley, Vol. 1 [cit. n. 1], p. 43 [emphasis added]), the hermaphroditism of the nineteenth-century homosexual was at an organismal level, not at the level of the body (with the rare exception of Krafft-Ebing’s “androgyny”) or of the soul, each of which belonged unambiguously to one gender or the other.

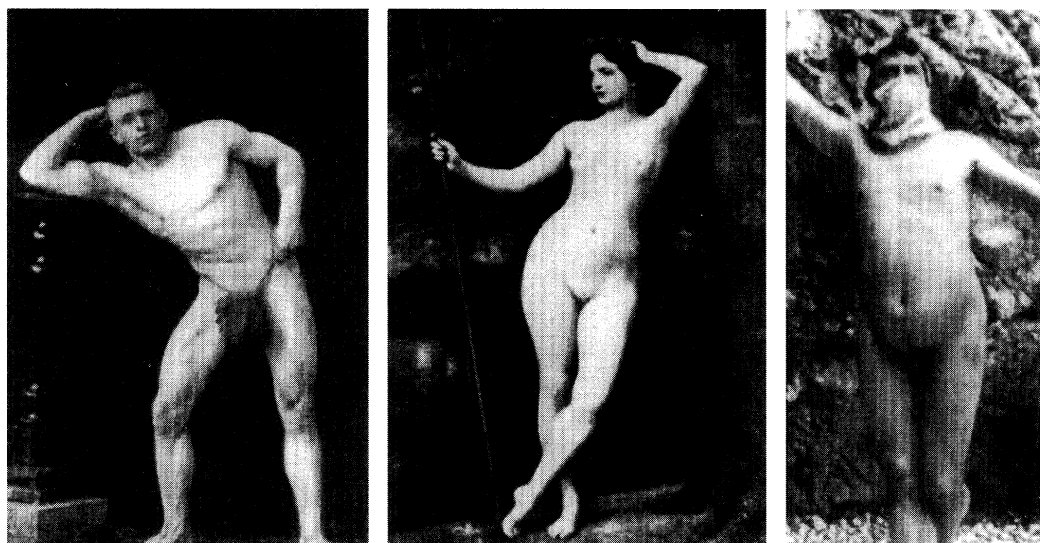


Figure 2. Male, female, and homosexual body types, illustrating differences in proportions of shoulders to hips. From plates accompanying Magnus Hirschfeld, "Die Ursachen und Wesen des Uranismus," *Jahrbuch für Sexuelle Zwischenstufen*, 1903, 5:1–193. (Courtesy of Magnus-Hirschfeld-Gesellschaft, Berlin.)

uals were psychologically as well as morphologically feminized, he asserted that he had never seen a male homosexual who was physically and mentally "a complete male."²²

Hirschfeld asserted that the signs of reversal of sexual characters in homosexuals were often overlooked because they were subtle and multiple, rather than explicit and singular. Women with flowing beards, for instance, were well known in the medical literature, but they were rarely homosexual in orientation; the same applied to men with well-developed breasts. The characteristic features of a homosexual body were many, but they could be recognized only by a trained observer. Male homosexuals, for example, often manifested periodic, menstruation-like phenomena such as nosebleeds and bleeding from the mouth or the anus or migraine, backaches, and depression. At the age when females experienced menopause, male homosexuals could exhibit similar symptoms, especially those of depression. To take another instance, the singing voices of male homosexuals were reminiscent of the descriptions of the voices of castrati; and in 463 homosexual men examined by Hirschfeld, the Adam's apple—the characteristic sign of laryngeal maturity that appears in males at puberty—was undeveloped in 128, poorly developed in 219, and normal in only 116. Among a sample of 500 homosexual men, 14 had no beard at all, 15 exhibited only a light down, and 132 possessed beards that were "sparser than in average men." Similarly, 98 of (presumably) the same group of 500 subjects had no body hair at all, 78 had unusually fine body hair, and 176 had body hair less dense than in average males. While the shoulders of average men were wider than their hips (and vice versa in average women), the hips of homosexual males tended to be as wide as or wider than their shoulders. (See Figure 2.) Male homosexuals, moreover, had smaller hands and their handshakes

²² F. L. von Neugebauer, "50 Missehen wegen Homosexualität der Gatten und einige Ehescheidungen wegen 'Erreuer de sexe,'" *Centralblatt für Gynäkologie*, 1899, 23:502–512; and Hirschfeld, "Ursachen und Wesen des Uranismus" (cit. n. 12), pp. 79–86.

were limper than those of average males. Their general physique, in as many as 57.6 percent of cases, was more rounded and feminine in contour than that of most males. Psychologically, they showed a far greater impressionability and lability of mood and disposition than a “complete man” (*Vollmann*).²³

This list is incomplete, but it gives us sufficient material to establish some important points about Hirschfeld’s approach to the issue of gender. First, he did not question traditional medical conceptions of male and female sexual characters. Second, he never bothered to establish exactly what he meant by the “average male”: it was simply a given, something his readers would be able to visualize for themselves without the slightest assistance or analysis. If homosexuality represented a deviation from the norm, then it was the deviation that Hirschfeld was concerned with. The norm itself he neither defined nor problematized. This attitude was complemented by his rhetoric of meticulous empiricism. Although never providing comprehensive statistical analyses of his cases, he took good care to emphasize at frequent intervals that he was reporting what he had seen personally in hundreds of men. Claiming the authority of raw, unprocessed numbers, Hirschfeld’s works exuded an empiricist confidence unmatched in comparable texts of the time.

Similar themes were evident in an early article where Hirschfeld spelled out his theory of the genesis of homosexuality. He began by stating the principle of sexual intermediacy, which he would uphold in countless publications throughout his career. This principle stipulated that there was no absolute, qualitative distinction between the male and the female. All humans were placed on a spectrum stretching between the hypothetical poles of absolute masculinity and absolute femininity. Every human being was partly male and partly female (i.e., intermediate between the absolute male and the absolute female), but the degree of maleness and femaleness varied with the individual. Sexual intermediacy, furthermore, was not confined to the body or the mind. The genital hermaphrodite was, obviously, an intermediate form; but so were the male homosexual, who was more female than the average man, and the adolescent tomboy, who was more male than the average girl of her age. Qualitatively, they all belonged together, representing different degrees of sexual intermediacy. The essence of this idea was, of course, ancient, and Ulrichs, not Hirschfeld, had been the first to apply it to homosexuality. Hirschfeld, however, breathed new life into the hypothesis: it became popular with activists, who welcomed it because of its message and meaning, while its rigorously “scientific” tone and language facilitated its quick dissemination (although not necessarily universal acceptance) in medical circles.²⁴

Hirschfeld used the concept of sexual intermediacy to claim the biological kinship of homosexuals and “normal” people but not to challenge traditional notions of normal masculinity and femininity. Nor was that his only inconsistency. Homosexuality, he claimed, had no direct link with disease or degeneration; the homosexual was merely “an important anthropological variety of the genus *Homo*.”²⁵ Despite these words, however, his conceptualization of homosexuality remained essentially pathological—as did that of virtually every contemporary medical writer on sexuality. For Hirschfeld, the world was full of sexually intermediate organisms, but they had come into being owing to *anomalous* bio-

²³ Hirschfeld, *Homosexualität*, pp. 137, 139–140, 130–131, 133–134, 137–138, 141–145, 161.

²⁴ Magnus Hirschfeld, “Die objektive Diagnose der Homosexualität,” *Jahrb. Sex. Zwischenst.*, 1899, 1:4–35. On the currency of Hirschfeld’s hypothesis see Sulloway, *Freud* (cit. n. 6), pp. 158–160, 292–296; and Gert Hekma, “‘A Female Soul in a Male Body’: Sexual Inversion as Gender Inversion in Nineteenth-Century Sexuality,” in *Third Sex, Third Gender: Beyond Sexual Dimorphism in Culture and History*, ed. Gilbert Herdt (New York: Zone, 1994), pp. 213–239.

²⁵ See Hirschfeld, *Homosexualität*, p. 389; and Bloch, *Sexualleben* (cit. n. 12), p. 553.

logical processes that needed to be understood. Elsewhere, he revealed his nineteenth-century roots even more clearly by arguing that although homosexuality had nothing to do with degeneration directly, it probably worked as a “prophylactic” against degeneration. When a family began to slide toward a degenerative sequence, nature brought about the birth of a homosexual, which, by stopping reproduction, prevented the transmission of the degenerative taint. A “cure” for homosexuality, if found, might therefore harm the species by allowing homosexuals to reproduce.²⁶ If Hirschfeld was to be believed, then, homosexuality was, at the same time, a form of variation of the human species, a pathological entity, and a protector of the species against degeneration. These fundamental inconsistencies came into harsh focus when one strand of Hirschfeld’s thought—that male homosexuals were pathologically feminized—compelled him to support the “treatment” of a condition that he claimed was a mere variety of nature and that—he also held—should be left untreated for eugenic reasons.²⁷

After enunciating the principle of universal sexual intermediacy, Hirschfeld presented five groups of popularly accepted differences between the sexes: differences in the sex glands—testes in males, ovaries in females; structural and functional differences in the internal and external genitals; differences in sexual characteristics that emerged at puberty—for example, development of breasts in females and growth of facial hair in males; differences in psychology—for example, women were kinder, men less so; and differences in sexual orientation—women were attracted to men and men to women. Hirschfeld accepted these differences as broadly valid, while claiming to deny them any status as absolute distinctions. “The sexes might be of the same worth and have the same rights,” he explained, “but they are not identical [*gleichartig*].” The female body was designed for pregnancy and the care and nourishment of the child. In keeping with this end, female sexuality and the female psyche were more receptive, sensitive, and passive than those of the male. Referring to contemporary feminist arguments that women had not been prominent in the arts and culture because they had not been allowed to contribute to them, he remarked that the absence of women from the highest realms of cultural activity was due less to any systematic male oppression than to the natural traits and limitations of femininity.²⁸ As far as his basic convictions on gender were concerned, then, Hirschfeld was firmly traditional, reducing femininity to a set of phenomena developed by nature to ensure the perpetuation of the species.

Hirschfeld argued that the earlier the biological differences between male and female were established in the life cycle, the more prominent and stable they were. The sex glands, for instance, developed from a bipotential rudiment very early in the life of the organism. They were, consequently, relatively immune to developmental disturbances, as confirmed by the clinical rarity of “true” hermaphrodites possessing an ovotestis or both ovaries and testes. Characters belonging to Hirschfeld’s second group—the internal and external gen-

²⁶ Medical sexologists found it easier to jettison the idea of disease than that of anomaly. Havelock Ellis, who rejected all degenerationist explanations of homosexuality, argued, quoting no less an authority than Rudolf Virchow (1821–1902), that homosexuality was pathological since any deviation from the norm was pathological, without necessarily being a disease. The sexologist Albert Moll remarked that homosexuality was not an illness but, like cleft palate, a pathological anomaly. See Ellis, *Sexual Inversion*, p. 321; and Albert Moll, “Die Behandlung der Homosexualität,” *Jahrb. Sex. Zwischenst.*, 1900, 2:1–29, on p. 6. For Hirschfeld’s eugenic strictures against the treatment of homosexuality see Hirschfeld, *Homosexualität*, p. 398.

²⁷ On this point see Herzer, *Magnus Hirschfeld* (cit. n. 4), pp. 98–99.

²⁸ Hirschfeld, *Homosexualität*, pp. 354 (quotation), 355. For the five groups see Hirschfeld, “Objektive Diagnose” (cit. n. 24), pp. 8–9.

itals—were more prone to disturbances but less so than those pertaining to the last three groups, all of which developed around puberty.²⁹

Homosexuality, essentially, was a condition where the sexual drive did not conform to the nature of the sexual organs. (Hirschfeld, predictably, was entirely satisfied with the traditional medical view that sexual drive and orientation were always heterosexual, i.e., that a true male would always desire only females. Unlike traditional physicians, however, he refused to identify masculinity with the testes alone.) A homosexual orientation was a developmental disturbance pertaining to the fifth group of Hirschfeld's classification. Since the differences of the fifth group emerged at the same period as those of the third and the fourth, homosexuals usually displayed developmental anomalies in those as well. They were always more or less masculinized or feminized in physical as well as psychological attributes. Moreover, the more feminized a male homosexual was, the stronger was his homosexual desire and the more masculine his preferred partners.³⁰

Since he argued that homosexuality resulted from a developmental disturbance, Hirschfeld could not very well avoid questions about the causes of that disturbance. Concern with the causes of a pathological phenomenon, furthermore, compelled a physician to address the issue of prevention or treatment.³¹ For years, however, Hirschfeld had no concrete theory of causality and, therefore, no clear ideas about the possibility of treatment. He once observed almost despairingly that only one agent could really extinguish homosexual desire: death.³²

THE GLANDS OF DESIRE: EUGEN STEINACH AND THE PHYSIOLOGY OF SEXUALITY

Shortly before World War I, Hirschfeld began to feel that some of the most persistent riddles of homosexuality might at last have been solved by the Viennese physiologist Eugen Steinach (1861–1944). (See Figure 3.) Since 1912 Steinach had been director of the Physiological Section of the Institute for Experimental Biology in Vienna, an institute devoted exclusively to laboratory research in zoology, botany, biochemistry, and physiology.³³ Born in 1861, Steinach had studied medicine at the University of Vienna, graduating in 1886, and then served as First Assistant to the eminent physiologist Ewald Hering (1834–1918) in Prague. Hering left Prague in 1895 but Steinach stayed on, eventually

²⁹ Hirschfeld, "Objektive Diagnose," pp. 15–17.

³⁰ *Ibid.*, pp. 25–26.

³¹ Few medical writers of the period conceived of homosexuality as an anthropological variety akin, say, to black or brown skin. On one relatively obscure physician who argued precisely this see Ellis, *Sexual Inversion*, p. 321. Many forms of treatment, ranging from castration to hypnosis, had been tried on homosexuals; none, however, had ever been found very efficacious. See *ibid.*, pp. 327–328; and Hirschfeld, *Homosexualität*, p. 425.

³² Hirschfeld, *Homosexualität*, p. 436. The developmentalists showed little interest in uncovering the cause(s) of the error supposed to cause homosexuality, as pointed out at the time in Albert Moll, *Untersuchungen über die Libido sexualis* (cit. n. 21), p. 670. This failure explains why, as Frank Sulloway put it, "after 1900, the theory of degeneration was retained by many theorists as a subsidiary concept": Sulloway, *Freud* (cit. n. 6), p. 297. For an example of such a "mixed" theory see Albert Moll, *Die konträre Sexualempfindung*, 3rd ed. (Berlin: Fischer's Medicinische Buchhandlung, 1899), pp. 367–368.

³³ See Hans Przibram, "Die neue Anstalt für experimentelle Biologie in Wien," *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte*, 1902, 74:152–155; and Karl Przibram, "Hans Przibram," in *Neue Österreichische Biographie ab 1815: Grosse Österreicher* (Vienna: Amalthea, 1957–), Vol. 13 (1959), pp. 184–191. Historians have tended to ignore this institution, except with reference to the controversial work of Paul Kammerer on the inheritance of acquired characters, on which see Albrecht Hirschmüller, "Paul Kammerer und die Vererbung erworbener Eigenschaften," *Medizinhistorisches Journal*, 1991, 26:26–77.

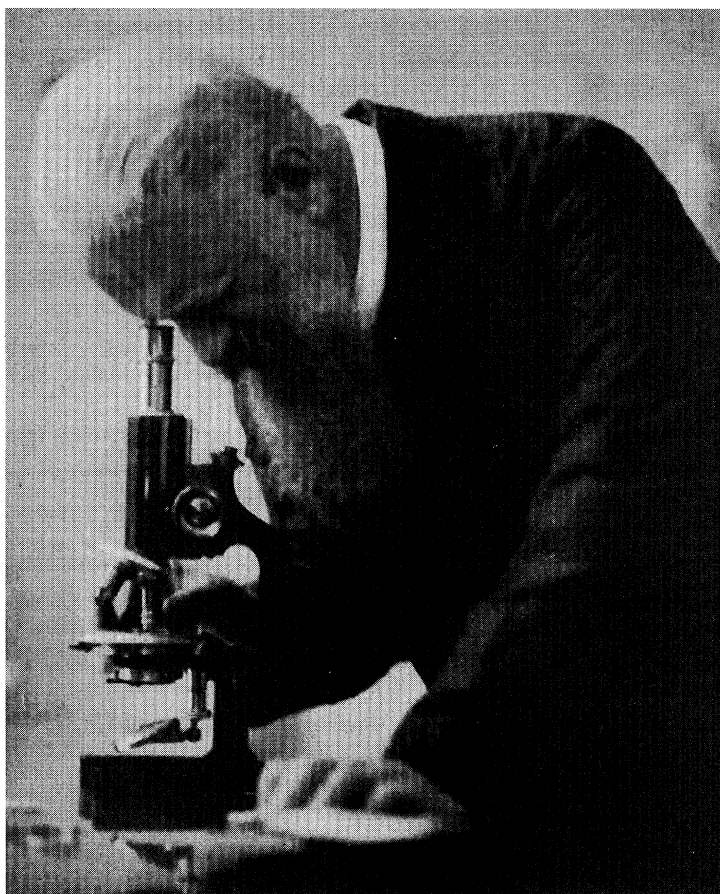


Figure 3. *Eugen Steinach.* From *Eugen Steinach and Josef Loebel, Sex and Life: Forty Years of Biological and Medical Experiments* (London: Faber & Faber, 1940).

obtaining a full professorship.³⁴ Then moving to Vienna, he remained there until 1938, when the Nazi takeover of Austria made it imperative for him—Steinach was half Jewish—to leave permanently. He lived in exile in Switzerland and, after repeated efforts to bring him to the United States had failed, died at Montreux at the age of eighty-four.

Today, Steinach is usually remembered for his claim that aging men could be “rejuvenated” by vasectomy. Even a casual examination of contemporary textbooks and journals shows, however, that he was one of the most widely known and controversial medical scientists of his time. His experiments challenged fundamental beliefs about masculinity,

³⁴ The literature on Steinach is scanty and generally superficial. The most useful accounts are Harry Benjamin, “Eugen Steinach, 1861–1944: A Life of Research,” *Scientific Monthly*, 1945, 61:427–442; Heinrich Meng, “Aus Eugen Steinachs Forschung,” in *Psyche und Hormon*, ed. Meng (Bern: Huber, 1960), pp. 117–122; Marc Klein, “L’oeuvre de Steinach dans l’histoire de la biologie de la reproduction,” in *Wien und die Weltmedizin*, ed. Erna Lesky (Vienna: Böhlau, 1974), pp. 204–213; and Diana Long Hall, “Biology, Sex Hormones, and Sexism in the 1920’s,” *Philosophical Forum*, 1973–1974, 5:81–96. Steinach’s intellectual autobiography (coauthored with Josef Loebel), *Sex and Life: Forty Years of Biological and Medical Experiments* (London: Faber & Faber, 1940), remains indispensable, if only because of the paucity of detailed scholarly studies.

femininity, and old age, suggesting new perspectives that galvanized physicians as well as laypeople. The celebrated Viennese satirist Karl Kraus imagined Steinach changing suffragettes into maternal women and journalists into real men. A film was made on his research, and a visiting American novelist urged Germans to regain their international dominance by subjecting their elites to Steinach's rejuvenative operation.³⁵ On at least one occasion Steinach was rumored to be on the verge of getting the Nobel Prize, and he remained newsworthy for the *New York Times* long after his rejuvenative operation had gone out of vogue.³⁶ Steinach, one can safely assume, enjoyed creating sensations; but the experimental research on which his exploits were based was rich, complex, and deserving of deeper historical exploration than it has so far attracted. It is essential to situate the controversial episodes of his career within the intellectual context of his larger research project on the developmental physiology of sex and to analyze how that project was shaped by sociocultural factors.

All of Steinach's work on sexual physiology was conducted at the Institute for Experimental Biology, which was explicitly dedicated to the experimental study of biological development and was "known," according to the British biologist D'Arcy Thompson, "to every naturalist who came to Vienna." The institute's founders (three independently wealthy biologists, Hans Przibram, Wilhelm Figdor, and Leopold von Portheim) were passionate believers in the research philosophy of the embryologist Wilhelm Roux, who had advocated the use of multiple, varied, and distortive experimentation in investigating the causes of organic development. Descriptive and comparative approaches, hitherto universal in biological research, had been dismissed by Roux as insufficient for the understanding of causality; his new science of "developmental mechanics" (*Entwicklungsmechanik*) would determine "the causes of organic forms and hence . . . the causes of the origin, maintenance, and involution of these forms." The only acceptable procedure for investigating these, according to Roux, was the "analytical experiment." To analyze development, one had first to distort its normal sequence by "isolating, transposing, destroying, weakening, stimulating, false union, passive deformation, changing the diet and the functional size of the parts of eggs, embryos, or more developed organisms, by the application of unaccustomed agencies like light, heat, electricity, and by the withdrawal of customary influences." Such distortions of a normal biological process would, of course, result in monstrosities. The careful study of those monstrosities, however, would enable the investigator to deduce how the distorted developmental processes worked under normal conditions. Roux once compared his own embryological experiments to "the insertion of

³⁵ See Karl Kraus, "Ich las es so," *Die Fackel*, 1914, 400–403:68–69. On Kraus's views on gender see Nike Wagner, *Geist und Geschlecht: Karl Kraus und die Erotik der Wiener Moderne* (Frankfurt am Main: Suhrkamp, 1981). For the comments of the American novelist Gertrude Atherton see "Mrs. Atherton Causes Amusement in Berlin: Newspapers Ridicule Her Suggestion for the Rejuvenation of All Germany's 'Supermen,'" *New York Times*, 6 Apr. 1924, Sect. 2, p. 7, col. 2. On Atherton's personal quest for rejuvenation by the irradiation of her ovaries at the age of sixty-six see Margaret Morganroth Gullette, "Creativity, Aging, Gender: A Study of Their Intersections, 1910–1935," in *Aging and Gender in Literature: Studies in Creativity*, ed. Anne M. Wyatt-Brown and Janice Rosen (Charlottesville: Univ. Press Virginia, 1993), pp. 19–48, on pp. 21–22. Steinach was far from alone in his interest in rejuvenation. See Benno Romeis, "Altern und Verjüngung," in *Handbuch der inneren Sekretion*, ed. Max Hirsch, 3 vols. in 5 (Leipzig: Kabitzsch, 1926–1933), Vol. 2, Pt. 2, pp. 1745–1986, for a comprehensive, critical review of the many available procedures. See also David Hamilton, *The Monkey Gland Affair* (London: Chatto & Windus, 1986).

³⁶ See, e.g., "Gland Treatment Spreads in America—Many Seekers of Youth—Steinach Method Now Used throughout Country—Effects Still Debated," *N.Y. Times*, 8 Apr. 1923, Sect. 9, p. 2, col. 7 (this item records the rumor of the Nobel Prize); "Steinach's Surgery of Rejuvenation," *Current Opinion* (New York), Jan. 1921, 70:82–84; "Dr. Steinach, 81 Today, Works on New Serum," *N.Y. Times*, 28 Jan. 1942, p. 20, col. 4; and "Dr. Eugen Steinach," *ibid.*, 16 May 1944, p. 20, col. 3.

a bomb into a newly established factory . . . with the purpose of drawing an inference about its inner organization from changes in production and from the course of its further development after the regulated [*angerichteten*] destruction."³⁷

No better description could be given of the experimental work of the scientists at the Institute of Experimental Biology, six of whom (including Steinach) Roux himself certified as his fellow workers in developmental mechanics.³⁸ Many papers from the institute—including several of Steinach's most important reports—were published in the *Archiv für Entwicklungsmechanik der Organismen*, which was founded in 1895 and edited by Roux himself until his death in 1924. Much of the experimental work done at the institute involved, in keeping with Roux's "bomb principle," the production of morphological anomalies and other distortions in development. Transplantation experiments, in particular, were immensely popular. Castration and transplantation of sex glands in a variety of permutations were the twin props of Steinach's research. He used multiple, varied, and distortive experiments to determine the physiological causes of the morphological attributes of sex. In contrast to other "gland scientists" of the time, who sought to discover novel forms of treatment or to prove the mere feasibility of glandular transplantations, Steinach designed his experiments with the primarily biological aim of elucidating the processes of sexual development.³⁹

In his first two series of experiments, reported in 1894 and 1910, Steinach established experimentally that somatic and behavioral sexual maturity was induced by chemical substances from the sex glands. Although male rats castrated before puberty did not grow up to be completely asexual, they were incapable of erection or intercourse. If they had been successfully grafted with testicles in infancy, however, they developed into fully masculine males. In functional terms, Steinach stated, the development of an immature animal into a sexually active male was dependent upon the chemical influence of testicular secretions

³⁷ D'Arcy W. Thompson, "Dr. Hans Przibram," *Nature*, 1945, 155:782; Wilhelm Roux, "The Problems, Methods, and Scope of Developmental Mechanics: An Introduction to the 'Archiv für Entwicklungsmechanik der Organismen,'" trans. W. M. Wheeler, in *Defining Biology: Lectures from the 1890s*, ed. Jane Maienschein (Cambridge, Mass.: Harvard Univ. Press, 1986), pp. 105–148, on pp. 107 (emphases removed), 125; and Roux, "Zur Orientierung über einige Probleme der embryonalen Entwicklung" (1885), in *Gesammelte Abhandlungen über Entwicklungsmechanik der Organismen*, 2 vols., Vol. 2 (Leipzig: Engelmann, 1895), pp. 154–155, trans. modified from that in Frederick Churchill, "Wilhelm Roux," in *Dictionary of Scientific Biography*, ed. Charles C. Gillispie, 18 vols. (New York: Scribner's, 1970–1980), Vol. 11, pp. 570–575, on p. 572. On Roux and his work see E. S. Russell, *Form and Function: A Contribution to the History of Animal Morphology* (London: John Murray, 1916; rpt., Chicago: Univ. Chicago Press, 1982), pp. 314–334; and Reinhard Mocek, "Wilhelm Roux und die Entwicklungsmechanik," *Wissenschaftliche Zeitschrift, Martin-Luther-Universität Halle-Wittenberg, Mathematisch-Naturwissenschaftliche Reihe*, 1974, 23(4):38–44. On the debate among turn-of-the-century biologists over observation and experimentation see Hans Querner, "Beobachtung oder Experiment? Die Methodenfrage in der Biologie um 1900," *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 1975, 68:4–12.

³⁸ See Wilhelm Roux, "Wilhelm Roux in Halle," in *Die Medizin der Gegenwart in Selbstdarstellungen*, ed. L. R. Grote (Leipzig: Meiner, 1923), pp. 141–206, on p. 173.

³⁹ See Hans Przibram, "Die Biologische Versuchsanstalt in Wien: Zweck, Einrichtung und Tätigkeit während der ersten fünf Jahre ihres Bestandes (1902–1907)," *Zeitschrift für Biologische Technik und Methodik*, 1908–1909, 1:234–264, 329–362, 409–433; 1910 (Suppl.), pp. 1–34. For examples of transplantation experiments see Przibram, *Tierpfropfung: Die Transplantation der Körperabschnitte, Organe und Keime* (Braunschweig: Vieweg, 1926); and the fourteen papers from the Physiological Section in *Archiv für Mikroskopische Anatomie und Entwicklungsmechanik*, 1923, 99(1). For overviews of the history of experimentation on sex glands around 1900 see C. Barker Jørgensen, *John Hunter, A. A. Berthold, and the Origins of Endocrinology* (Odense: Odense Univ. Press, 1971); V. C. Medvei, *The History of Clinical Endocrinology* (Carnforth, Lancashire: Parthenon, 1993), pp. 200–207; Oudshoorn, *Beyond the Natural Body* (cit. n. 3), pp. 15–41; George W. Corner, "The Early History of the Oestrogenic Hormones," *Journal of Endocrinology*, 1964–1965, 31:iii–xvii; and Merriley Borell, "Organotherapy and the Emergence of Reproductive Endocrinology," *Journal of the History of Biology*, 1985, 18:1–30.

(the nature of which remained unknown) on the central nervous system, an effect that he named "erotization" (*Erotisierung*). Once completed, however, erotization was long lasting, even in the absence of the testes. A certain degree of sexual development was independent of glands, but the latter, Steinach stressed, were essential for the full development of all the sexual characters. The latter included the so-called functional and psychic ones, such as sexual interest in the other sex during the breeding season: Steinach's entire research program, and not simply his later work on human homosexuality, was distinguished by a keen interest in the nonmorphological aspects of sex.⁴⁰

The sexual psyche, however, was tied up intimately with the sexual body, and Steinach's project could not possibly advance without the elucidation of fundamental physiological questions. One of the most crucial was this: Was the internal secretory activity of the testis linked with the sperm-producing function of the gland, or were they two autonomous functions? Steinach argued that the generative cells of the testis produced spermatozoa alone and had nothing to do with the internal secretions responsible for sexual maturation. There was ample evidence, he argued, that irradiation with X rays destroyed the germinal portion of the testis but did not interfere with the development of secondary sexual characters. Moreover, all his experimental castrates had developed into complete males after being grafted with testes, even though microscopic examination of the grafts did not reveal any surviving germinal cells. The interstitial cells (or Leydig cells) had, however, survived in the grafted glands and even proliferated beyond their usual numbers. It was these cells, according to Steinach, that were responsible for the internal secretory function of the testes.⁴¹

This hypothesis was far from new and had already, as Steinach acknowledged, been argued by two anatomists from Strassburg, Paul Ancel and Pol Bouin.⁴² It nevertheless came to be associated virtually exclusively with Steinach's name in the German-speaking lands, especially after the publication of his rejuvenation experiments in 1920, and aroused intense hostility and opposition among medical scientists. The leitmotiv of the German criticism was that no experimental procedure could completely destroy the germinal tissue while leaving the interstitial cells undamaged. Even if that were possible, the critics argued, the endocrine function could well be maintained owing to survival of the third cellular element of the testicle: the supportive cells of Sertoli. Steinach remained undaunted, however, and since, as far as he was concerned, the interstitial cells constituted the unquestionable source of the internal secretions that induced the somatic and psychobehavioral changes of puberty, he christened them collectively the "puberty-gland" (*Pubertätsdrüse*).⁴³

⁴⁰ See Eugen Steinach, "Untersuchungen zur vergleichenden Physiologie der männlichen Geschlechtsorgane insbesondere der accessorischen Geschlechtsdrüsen," *Archiv für die Gesamte Physiologie*, 1894, 56:304–338; and Steinach, "Geschlechtstrieb und echt sekundäre Geschlechtsmerkmale als Folge der innersekretorischen Funktion der Keimdrüse," *Zentralblatt für Physiologie*, 1910, 24:551–566.

⁴¹ Steinach, "Geschlechtstrieb," p. 564.

⁴² See Eugen Steinach, "Willkürliche Umwandlung von Säugetier-Männchen in Tiere mit ausgeprägt weiblichen Geschlechtscharakteren und weiblicher Psyche," *Pflügers Archiv für die Gesamte Physiologie*, 1912, 144:71–108, on p. 73; Pol Bouin and Paul Ancel, "Recherches sur les cellules interstitielles du testicule des mammifères," *Archives de Zoologie Expérimentale et Générale*, 4th Ser., 1903, 1:437–523; and Marc Klein, "Sur les interférences des sciences fondamentales et de la clinique dans l'essor de l'endocrinologie sexuelle," *Clio Medica*, 1973, 8:31–52, on pp. 40–41. Klein, a former student of Bouin's, described Steinach as the leading defender of the Bouin-Ancel theory against its opponents: *ibid.*, p. 42.

⁴³ Steinach, "Willkürliche Umwandlung," p. 75. For criticisms of Steinach's views see the following examples drawn from a voluminous and repetitive literature: Hermann Stieve, "Entwicklung, Bau und Bedeutung der Keimdrüsenzweischzellen," *Ergebnisse der Anatomie und Entwicklungsgeschichte*, 1921, 23:1–249; Carl

Steinach's next project was to determine whether the secretions of the sex glands were sex-specific: would the testes, for instance, induce masculinity in a male and femininity in a female? These questions were far from trivial in the early twentieth century. Since the known endocrine secretions such as thyroxin and adrenaline exerted identical effects in either sex, the sex-specificity of the gonadal secretions could not be assumed without concrete evidence. Moreover, some medical scientists, including the well-known Viennese gynecologist and pioneer in experimental research on ovarian functions Josef Halban (1870–1937), believed that sex glands did not cause the genesis of the sexual characters but only exerted a protective function over them. Male and female sexual characters were laid down *ab ovo*, and the action of the sex glands on them was not sex-specific: ovaries were as effective in protecting the male sexual characters as testes.⁴⁴ If this was right, then the puberty-gland stimulated the development of the homologous as well as the heterologous sex characters.

Finding this to be *prima facie* implausible, Steinach decided to test the hypothesis by experiments on rats and guinea pigs. If an ovarian graft feminized the castrated male animal, then, he reasoned, Halban would be proved wrong and the puberty-gland could be taken to be sex-specific.⁴⁵ He first castrated his male animals—to eliminate the influence of the testes—and then transplanted ovaries into them. The testes were left intact in ovary-transplanted controls. In the controls the ovarian grafts did not “take,” but they did in 45 percent of the castrates, in which there was no development of the penis, the seminal vesicles, or the prostate.⁴⁶ Skeletal elements did not attain the typical male dimensions, nor did the fur grow into the characteristically rough and thick coat of the male. (See Figure 4.) The puberty-gland, therefore, was sex-specific in its effects. That, however, was not all. The female puberty-gland did not just leave the male sex characters alone: it actively inhibited them. Steinach's earlier experiments, for example, had established that penile growth in castrates did not cease immediately after castration: in castrates with implanted ovaries, however, even this exiguous growth did not occur. “The penis,” observed Steinach, “no longer deserves its name and appears to have been reduced to a clitoris.”⁴⁷ If uterus and Fallopian tubes were transplanted along with the ovary in castrated males, they developed to the extent seen in normal females. “Indifferent” features such as the male nipple, areola, and mammary gland grew to female proportions, too, and did so

Benda, “Bemerkungen zur normalen und pathologischen Histologie der Zwischenzellen des Menschen und der Säugetiere,” *Archiv für Frauenkunde und Eugenetik*, 1921, 7:30–40; and Benno Romeis, “Geschlechtszellen oder Zwischenzellen? Kritisches Referat über die Ergebnisse der einschlägigen Arbeiten des letzten Jahres,” *Klinische Wochenschrift*, 1922, 1:960–964, 1005–1010, 1064–1067. Later, Benda and Romeis admitted that Steinach had been right about the interstitial origin of the hormones. See Romeis, “Über ein beinahe acht Jahre altes Hodentransplantat mit erhaltener inkretorischer Funktion,” *ibid.*, 1933, 12:1640–1642, on p. 1642; and Benda, “Diskussion” following Eugen Steinach, “Antagonistische Wirkungen der Keimdrüsenhormone,” in *Verhandlungen des I. Internationalen Kongresses für Sexualforschung*, Berlin, ed. Max Marcuse, 5 vols. (Berlin: Marcus & Weber, 1927–1928), Vol. 1, pp. 222–223.

⁴⁴ See Josef Halban, “Die Entstehung der Geschlechtscharaktere: Eine Studie über den formativen Einfluss der Keimdrüse,” *Archiv für Gynäkologie*, 1903, 70:205–308, on pp. 260–261; and Steinach, “Willkürliche Umwandlung,” pp. 76–77.

⁴⁵ Steinach, “Willkürliche Umwandlung,” pp. 76–77. For a contemporary review of experimental transplantation of the gonads see W. E. Castle and J. C. Phillips, *On Germinal Transplantation in Vertebrates* (Washington, D.C.: Carnegie Institution, 1911).

⁴⁶ Eugen Steinach, “Pubertätsdrüsen und Zwitterbildung,” *Archiv für Entwicklungsmechanik der Organismen*, 1917, 42:307–332, on p. 308. All the animals were young enough not to have developed any marked somatic sexual characters, which ensured that later changes in sexual characters would not be missed. See Steinach, “Willkürliche Umwandlung,” pp. 78–81.

⁴⁷ Steinach, “Willkürliche Umwandlung,” p. 87.

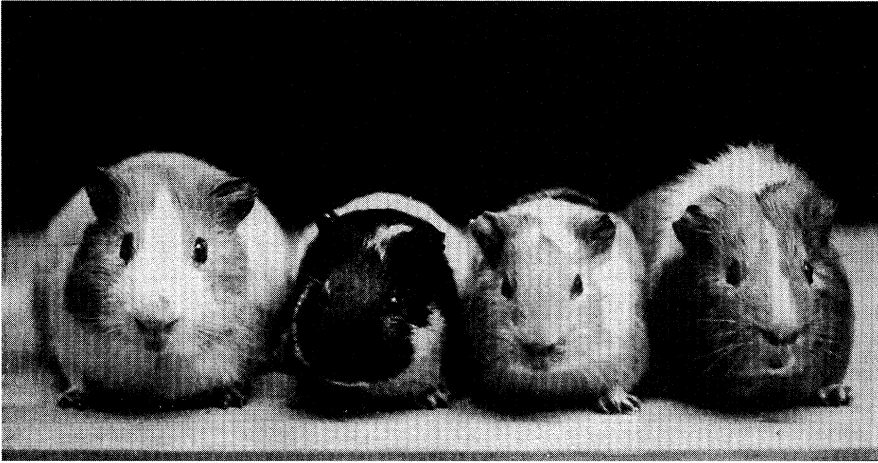


Figure 4. Steinach's feminized guinea pigs. Left to right: normal brother, feminized brother, normal sister, castrated brother. From Eugen Steinach and Josef Loebel, *Sex and Life: Forty Years of Biological and Medical Experiments* (London: Faber & Faber, 1940).

at an accelerated tempo. Even histologically, the mammary tissue was indistinguishable from actual female breast tissue. The puberty-glands, then, did not simply induce the growth of selected traits; they had the power to transform the sexual characters and suppress the ones associated with the other sex.⁴⁸

Characteristically, Steinach did not confine his investigations to the somatic sexual characters: sexual behavior was equally important. When his "feminized" animals reached puberty, they did not display characteristically male mating behavior and showed no interest in females in heat. Instead, they behaved like females and were treated as such by males. The feminized rats held their tails high while being pursued by males; this was, according to Steinach, a typically female behavioral trait that aided the olfactory identification of sex and assessment of the degree of heat. (An occasional raising of the tail, he conceded, might occur in males—intact or castrated—but never in so characteristic or sustained a manner.) "Real" males would never let themselves be pursued: they would turn around and fight the pursuer. The feminized animals, on the contrary, showed the characteristic defense reflex of females: the raising of a hind foot and sharp backstrike to prevent being clasped by an unwelcome male. The most decisive sign, of course, was that the feminized animals were treated exactly as females by males. Steinach later reported that all these features remained unattenuated more than three years after the transplantations.⁴⁹

⁴⁸ In partly successful cases, where the ovarian grafts had been resorbed after some development, the nipples enlarged and then returned to an indeterminate stage between male and female; see *ibid.* pp. 88–91. The grafts also transformed the sexual characters with respect to musculoskeletal growth. Castrated males with ovarian grafts never attained the typical masculine bulk, acquiring instead characteristic feminine dimensions and the shorter, finer coat of the female; see *ibid.*, pp. 92–102.

⁴⁹ *Ibid.*, pp. 103–104. Many of these findings were confirmed by other researchers. For references see Alexander Lipschütz, *Internal Secretions of the Sex Glands: The Problem of the "Puberty Gland"* (Cambridge: Heffer, 1924), pp. 297–299, 304–306. Lipschütz himself remained chary of drawing sweeping (and anthropomorphic) conclusions from the behavior of small animals; see *ibid.*, pp. 298, 365. For Steinach's later report see Steinach, "Pubertätsdrüsen und Zwitterbildung" (cit. n. 46), p. 308.

Steinach also tried to masculinize females by removing the ovaries of infants and replacing them with testicular grafts. This proved to be a much more difficult task than the feminization of castrated males. Testicular grafts proved much less hardy than ovarian tissue grafts. There were, however, a few successful cases. In the “masculinized” females, the nipples, mammary glands, and uterus remained in a rudimentary, undeveloped state, while the body build and fur were transformed to typically masculine forms. Sexual behavior was masculinized too: the experimental animals pursued females in heat, fought with other males over possession of females, and clasped them in the typically male way.⁵⁰

Neither the somatic nor the psychobehavioral sexual characters, then, were laid down irreversibly *ab ovo*. They were constantly under the control of the internal secretions and, therefore, constantly modifiable to some degree.⁵¹ Steinach did not deny that the earlier the transplantation of the heterologous gland was performed, the greater was the sexual development in the heterologous direction. With time, therefore, the sexual characters grew more fixed and less amenable to transformation by glandular interference. The key point, however, was that they were never so completely fixed as to be beyond *any* modification by such interference. Moreover, the male and female puberty glands were now shown to stimulate the development of homologous sex characters and actively to inhibit the development of heterologous characters. This was not a new concept, and Steinach merely claimed to be the first to have validated it experimentally.⁵² Eventually, he reformulated this concept to argue that it was the secretions of the sex glands, rather than the glands themselves, that were antagonistic to each other. At first this idea was found useful by others, such as the American zoologist Frank Lillie, and it proved to be a valuable stimulus for research: the concept of the regulation of the sex glands by the pituitary was actually evolved in the course of experiments designed to disprove Steinach’s notion of sex-gland antagonism.⁵³

Steinach, of course, did not share those doubts about his theory of sex-gland antagonism and now wondered what would happen if both male and female sex glands were implanted in the same animal. Castrating male guinea pigs in infancy, he transplanted ovaries and testes in each animal. Prolonged survival of both grafts was not as frequent as the survival of single grafts in his previous experiments: one of the two grafts perished in 80 percent of cases. In the successful cases (the number of which he did not disclose), however, the

⁵⁰ Eugen Steinach, “Feminierung von Männchen und Maskulierung von Weibchen,” *Zentralbl. Physiol.*, 1913, 27:717–723, on pp. 722–723.

⁵¹ Although Mendel’s experiments had been rediscovered around 1900 and the sex chromosomes identified in the early years of the twentieth century, a definitive theory of the determination of sex did not immediately follow. See John Farley, *Gametes and Spores: Ideas about Sexual Reproduction, 1750–1914* (Baltimore: Johns Hopkins Univ. Press, 1982), pp. 209–234. Even in 1922, Francis H. A. Marshall stated in his magisterial textbook of reproductive physiology that “the sex of the future organism is determined in different cases by different factors and at different stages of development”: F. H. A. Marshall, *The Physiology of Reproduction*, 2nd ed. (London: Longman, 1922), p. 700.

⁵² See Steinach, “Willkürliche Umwandlung” (cit. n. 42), p. 104. Steinach emphasized the priority of Curt Herbst (1866–1946); see *ibid.*, p. 105. For Herbst’s views see Curt Herbst, *Formative Reize in der tierischen Ontogenese* (Leipzig: Georgi, 1901), pp. 75–76.

⁵³ For the later reformulation see Steinach, “Pubertätsdrüsen und Zwitterbildung” (cit. n. 46), pp. 309–310; and Eugen Steinach and H. Kun, “Antagonistische Wirkungen der Keimdrüsen-Hormone,” *Biologia Generalis*, 1926, 2:815–834, on pp. 817–820. See also F. R. Lillie, “The Theory of the Free-Martin,” *Science*, N.S., 1916, 43:611–613, on p. 612; C. R. Moore, “A Critique of Sex Hormone Antagonism,” in *Proceedings of the Second International Congress for Sex Research, London, 1930*, ed. A. W. Greenwood (London: Oliver & Boyd, 1931), pp. 293–303; and Dorothy Price, “Feedback Control of Gonadal and Hypophysal Hormones: Evolution of the Concept,” in *Pioneers in Neuroendocrinology*, ed. Joseph Meites, B. T. Donovan, and S. M. McCann, 2 vols., Vol. 1 (New York: Plenum, 1975), pp. 217–238.

results were striking, albeit not so striking as to justify the flamboyant label “experimental hermaphrodite.”⁵⁴ The so-called experimental hermaphrodites, when fully grown, had the male build and appearance. The female puberty-gland’s inhibitory influence on musculo-skeletal growth, Steinach suggested, had been nullified by the male puberty-gland’s stimulatory influence. The fur, too, was masculine, and the penis and the seminal vesicles showed no stunting. The male puberty-gland could, therefore, induce the development of homologous characters, even in the presence of a functioning female puberty-gland. It could not, however, inhibit heterologous characters. The nipples, areolae, and mammary tissue became fully feminized in the animals. As soon as the ovarian graft was removed, the breasts returned to the usual male condition and the animal developed in a generally masculine manner. Removal of the testicular graft, on the other hand, led to feminine development. The sexual behavior of the experimental hermaphrodites was initially masculine, but this was often succeeded by a feminine phase in which an animal that had previously been attacked as a male by other males then became an object of sexual interest to them. This feminine phase lasted for two to four weeks. It coincided with lactation, and the two features recurred together at regular intervals of two to three months. They never occurred, however, in the absence of the ovarian graft. The female puberty-gland, thus, was *cyclically* active. Feminization occurred only when the secretory levels were at their highest. The central nervous system reacted to these fluctuations: when the female hormones ran low, the originally male-erotized brain operated in its normal male mode.⁵⁵

SOLVING THE RIDDLE OF HOMOSEXUALITY: “A FEMALE GLAND IN A MALE BODY”

All of his experimental findings, Steinach asserted, were clearly applicable to humans. His findings suggested that hermaphroditism and homosexuality were ultimately caused by the lack of sexual differentiation in the gonads, which led to the simultaneous production of male and female secretions. When congenital, such a lack of differentiation caused anatomical hermaphroditism. In other instances, however, the aberrant secretory cells might lie dormant until adult life. The individual would then develop physically as, say, a male, but later in his life the abnormal secretions might be “switched on,” turning him into a psychosexual female who was sexually drawn to other males.⁵⁶ Sexual identity and orientation, then, were produced largely by the glands and were not inherent to a person’s psyche.

Steinach was careful to link his hypotheses with the reports of clinical sexologists, among which the work of Magnus Hirschfeld was prominent. From 1912, Hirschfeld had speculated about possible chemical bases of gender and sexual behavior, and he had followed Steinach’s experiments with interest. Shortly before the outbreak of the Great War, Hirschfeld had traveled to Vienna, visited Steinach in his laboratory, examined the mas-

⁵⁴ Steinach, “Pubertätsdrüsen und Zwitterbildung,” pp. 312–318. Steinach described the antagonism of puberty-glands as the “battle of the gonads” (*Kampf der Gonaden*). See Eugen Steinach, “Künstliche und natürliche Zwitterdrüsen und ihre analogen Wirkungen: Drei Mitteilungen,” *Arch. Entwicklungsmech. Organism.*, 1920, 46:12–37, on p. 13. The phrase was reminiscent of Wilhelm Roux’s celebrated concept of the “battle of the parts” in the development of an organism. See Wilhelm Roux, *Der Kampf der Theile im Organismus* (Leipzig: Engelmann, 1881); and Steinach and Loebel, *Sex and Life* (cit. n. 34), p. 131.

⁵⁵ Steinach, “Pubertätsdrüsen und Zwitterbildung,” pp. 320–323, 323–325. Similar experimental hermaphrodites were created independently by Knud Sand (1887–1968) in Copenhagen. See Knud Sand, “Experimenteller Hermaphroditismus: Vorläufige Mitteilung,” *Pflügers Arch. Ges. Physiol.*, 1919, 173:1–7.

⁵⁶ See Steinach, “Künstliche und natürliche Zwitterdrüsen” (cit. n. 54), p. 25; and Steinach, “Pubertätsdrüsen und Zwitterbildung,” pp. 328–330.

culinized and feminized animals, and published appreciative articles on the experiments. Hirschfeld had even suggested that Steinach transplant ovaries and testes simultaneously in a castrated animal and had been delighted to learn that Steinach had independently commenced such experiments.⁵⁷

Their relationship, however, rested primarily upon the exchange of ideas, an exchange that reinforced the work of each. Steinach made good use of Hirschfeld's clinical evidence that male homosexuals were not simply psychosexually drawn to men but were somatically feminized as well. This suggested that the condition was due to a secretory anomaly of the sex glands. Citing Hirschfeld's clinical evidence to "establish" that homosexuality was congenital, Steinach proceeded to "explain" this as the consequence of imperfectly differentiated sex glands. Hirschfeld then carefully quoted these passages in his own writings, declaring that Steinach's experimental findings had established the validity of his clinical hypotheses or, as he once put it more colorfully, that nature had already produced human beings with the features of Steinach's feminized and masculinized animals.⁵⁸ (See Figure 5.) Hirschfeld's clinical work, of course, was part of his broader political program for the emancipation of homosexuals, and he used Steinach, in effect, as a political ally. If Steinach was right, homosexuality resulted from a specific congenital anomaly. It was not a progressive disease; it could not be spread by seduction; and, far from being a crime, it was no more dangerous than psychosexual femininity.

Whatever its cause, however, homosexuality remained an anomaly. Could it, then, be corrected? Hirschfeld initially dismissed this as an impossible dream.⁵⁹ Not so Steinach. Encouraged by his success in modifying the sexual attributes of laboratory animals, and convinced by Hirschfeld that his results were applicable to humans, he turned enthusiastically from guinea pigs to men. What, he asked, would happen if the testicles of a homosexual were removed and replaced with "normal" glands? Not being a clinician himself, he enlisted the cooperation of the urologist Robert Lichtenstern, who had already gained some relevant experience by transplanting testes in a man who had lost his own in an explosion and suffered subsequently from loss of libido and such physical symptoms as loss of body hair. The patient had experienced lasting improvement in his condition after the grafting. Gonadal grafting, therefore, seemed both feasible and efficacious in humans.⁶⁰

⁵⁷ Magnus Hirschfeld, "Die Untersuchungen und Forschungen von Professor E. Steinach über künstliche Vermännlichung, Verweiblichung und Hermaphrodisierung," *Vierteljahrsberichte des Wissenschaftlich-Humani-tären Komitees/Jahrb. Sex. Zwischenst.*, 1917, 17:3–21. The earliest glandular explanation of homosexuality that I know of was sketched out by Otto Weininger, who recorded it in a 1901 draft and never published it in its full form. Weininger had reasoned that male homosexuality could be "cured" if the subject's weak masculinity could be supplemented by testicular extracts. He is known to have attempted experiments, possibly on himself. For more details see Chandak Sengoopta, "Science, Sexuality, and Gender in the Fin de Siècle: Otto Weininger as Baedeker," *History of Science*, 1992, 30:249–279, on pp. 266–267. For Hirschfeld's suggestion that masculine and feminine sexual desire were engendered, respectively, by hypothetical chemical substances, which he named andrin and gynäcin, see Hirschfeld, *Naturgesetze der Liebe* (Berlin: Pulvermacher, 1912), pp. 179, 182. In 1914 Hirschfeld considered it logical to suppose that male homosexuality might be caused by a deficiency of andrin. See Hirschfeld, *Homosexualität*, p. 416.

⁵⁸ Steinach, "Pubertätsdrüsen und Zwitterbildung" (cit. n. 46), pp. 326–327; and Hirschfeld, "Untersuchungen und Forschungen," pp. 15, 18.

⁵⁹ In 1918, declaring that Steinach's experiments were astonishing feats of research, Hirschfeld warned that the possibility of curing homosexuality did not entail the justifiability of such cures. See Magnus Hirschfeld, *Sexualpathologie*, 3 vols. (Bonn: Marcus & Weber, 1917–1920), Vol. 2: *Sexuelle Zwischenstufen* (1918), p. 218.

⁶⁰ Robert Lichtenstern, "Mit Erfolg ausgeführte Hodentransplantation beim Menschen," *München. Med. Wochenschr.*, 1916, 63:673–675. For references to many contemporary reports of successful testicular transplantations (for various reasons unrelated to homosexuality) see Lichtenstern, *Die Überpflanzung der männlichen Keimdrüse* (Vienna: Springer, 1924), pp. 57–64. Although the phenomenon of graft rejection was widely known and feared, there was, as yet, no universally accepted immunological theory to explain rejection and guide the matching of donor and recipient. See Michael F. A. Woodruff, *The Transplantation of Tissues and Organs* (Springfield, Ill.: Thomas, 1960), pp. 67–69.

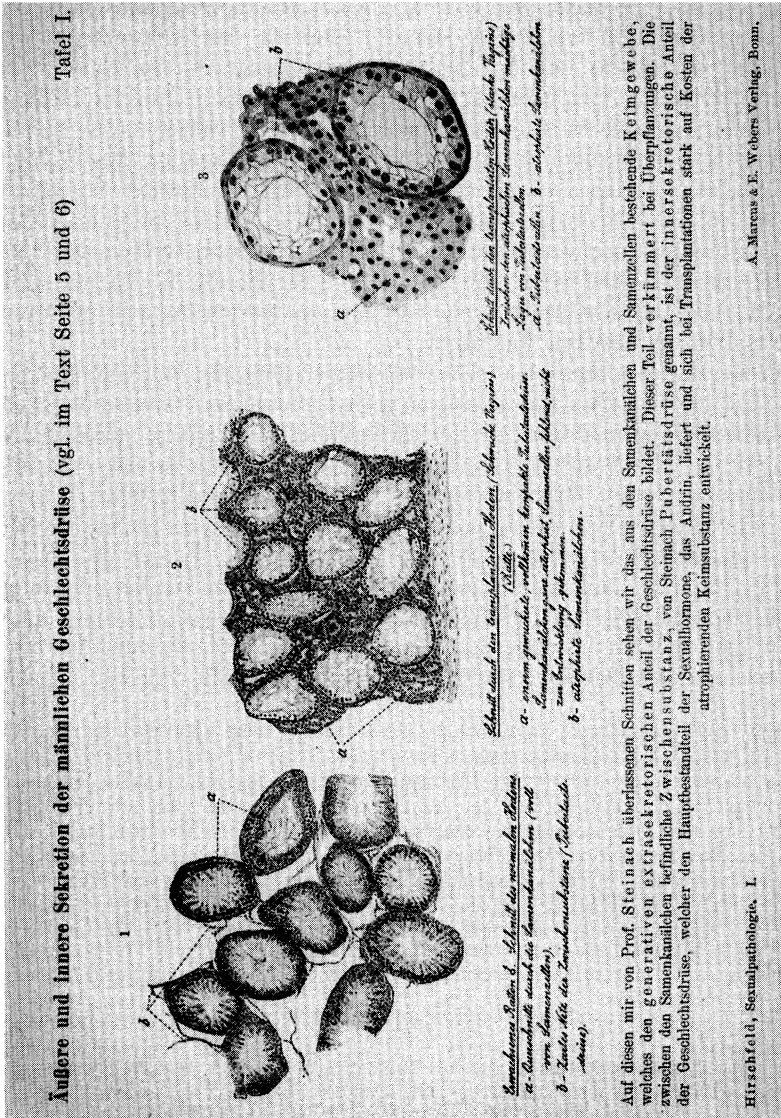


Figure 5. Illustrations of testicular histology from Magnus Hirschfeld, *Sexualpathologie*, Volume 1 (Bonn: Marcus & Weber, 1921). Thanking Eugen Steinach for providing the sections, the German caption summarizes Steinach's observations on the atrophy of the germinal tissue and the compensatory hypertrophy of the "puberty-gland" in testicular grafts. The caption accepts Steinach's theory that the "puberty-gland" was the source of the masculinizing secretion of the testes but refers to the secretion as andrin, a name that Hirschfeld had coined years before but that Steinach never used. (Courtesy of Magnus-Hirschfeld-Gesellschaft, Berlin.)

Steinach and Lichtenstern's first experimental subject was a thirty-year-old homosexual whose testes needed to be removed because of tuberculosis. Steinach emphasized that the subject showed marked somatic feminization, which suggested a glandular anomaly. The donor was a healthy and sexually "normal" man who had an undescended testis that needed to be removed. Twelve days after Lichtenstern performed the "surgical exchange," the homosexual subject reported having erections and erotic dreams of a heterosexual nature. He had sex with a female prostitute six weeks after surgery and many times subsequently. His voice became deeper and his body more masculine. In less than a year he married, writing to his physicians: "My wife is very satisfied with me . . . I am disgusted to think of the time when I felt that other passion." Steinach and Lichtenstern discounted the possibility that this metamorphosis resulted from suggestive influences, pointing out that the patient had also become somatically masculinized after the transplantation. They did not, however, recommend an unrestricted use of similar operations in cases of homosexuality, claiming merely to have demonstrated one way of overcoming a condition that was "unpleasant and dangerous" for affected individuals as well as for society in general.⁶¹ Subsequently, Lichtenstern conducted similar transplantations on four other homosexual men in the hope of "curing" their homosexuality.

Steinach followed up these cases with histological examinations of the testes removed from the homosexual men. There were only five specimens. In comparison with control specimens from "normal" men, Steinach found the testicles of the homosexuals to be characterized by variable atrophy of the germinal element and sparse interstitial cells. He also found many large, unusual cells that, he felt, were not normally present in testicular tissue. Reminiscent of the lutein cells of the ovary, their microscopic appearance was so characteristic that, Steinach proclaimed, even a physician with little experience of histological work could spot them without difficulty. Displaying yet again his penchant for pithy labels, Steinach christened them "F-cells."⁶² Hirschfeld, one can safely speculate, was exultant at this confirmation of his deepest conviction; others, however, proved more skeptical.

Medical scientists and clinicians debated Steinach's theory vigorously. Histologists rejected it unanimously: the so-called F-cells, they declared, were simply atypical forms of usual constituents of testicular tissue.⁶³ Clinicians such as the sexologist Albert Moll and the psychiatrist Robert Gaupp responded more ambivalently. While not denying that homosexuality might have a glandular cause, they pointed out that homosexuals and their behavioral patterns were too diverse to be explained by any one factor. Providing a brief summary of Steinach's experimental research and his surgical treatment for homosexuality, Sigmund Freud remarked that "it would be unjustifiable to assert that these interesting experiments put the theory of inversion on a new basis, and it would be hasty to expect

⁶¹ Eugen Steinach and Robert Lichtenstern, "Umstimmung der Homosexualität durch Austausch der Pubertätsdrüsen," *München. Med. Wochenschr.*, 1918, 65:145–148, on pp. 147, 147–148.

⁶² Eugen Steinach, "Histologische Beschaffenheit der Keimdrüse bei homosexuellen Männern," *Arch. Entwicklunsgemech. Organism.*, 1920, 46:29–37, on pp. 31–34. Steinach had earlier claimed to have found male interstitial cells in the ovaries of female "homosexual" goats; see Steinach, "Künstliche und natürliche Zwitterdrüsen" (cit. n. 54), pp. 26–28.

⁶³ For representative opinions see Benda, "Bemerkungen" (cit. n. 43); F. Scheunig, "Zur Frage von Steinachs F-Zellen," *Arch. Gynäkol.*, 1923, 116:660–683; and Benno Slotopolsky and Hans R. Schinz, "Histologische Hodenbefunde bei Sexualverbrechern," *Virchows Archiv für Pathologische Anatomie und Physiologie*, 1925, 257:294–355. Even Knud Sand, who supported Steinach on many other issues, could not identify any characteristic cellular pathology in homosexuals. See Knud Sand and Harald Okkels, "L'histopathologie du testicule humain chez des individus a sexualité anormale," *Comptes Rendus Hebdomadaires des Séances et Mémoires de la Société de Biologie, Paris*, 1936, 123:339–344.

them to offer a universal means of ‘curing’ homosexuality.” In any case, Freud declared, psychoanalysis assumed that all humans were sexually intermediate, and Steinach’s experiments did not challenge that hypothesis. Elsewhere, he was more complimentary. Psychoanalysis, he declared in 1920, aimed only to identify the “psychical mechanisms” of sexual object choice and their instinctual origins: “There its work ends, and it leaves the rest to biological research, which has recently brought to light, through Steinach’s experiments, such very important results.”⁶⁴

Among surgeons, Lichtenstern’s first transplant led to a brief vogue for such operations. Richard Mühsam reported that he had successfully reversed homosexuality in two patients referred to him by Hirschfeld, but added that histological examination had failed to find any F-cells in the removed testicles. There was worse to come. Mühsam found that although testicular transplantations led to quick heterosexualization, evinced by erotic dreams, it was a fleeting phenomenon and dissipated quite rapidly. By 1926 he declared that the clinical results of the operation were so poor that he had stopped performing it.⁶⁵ Other surgeons followed a similar path.⁶⁶ Magnus Hirschfeld was Steinach’s only consistent supporter during this episode. He publicized the transplant operation in his journal, referred patients to surgeons for the operation, and conducted a histological investigation of testicular tissue from homosexuals in 1920. Even he and his associates, however, failed to find F-cells in the testicular specimens, although they did not let that prevent them from claiming that the specimens did not quite measure up to histological norms. In that same year, Hirschfeld expressed confidence in the eventual confirmation of Steinach’s claims. Homosexuality would then be explained as completely biological and congenital, and the male homosexual would be revealed as a physical male in possession not of a female soul, as Ulrichs had claimed, but, rather, of a female gland.⁶⁷

Hirschfeld’s faith in Steinach, of course, was far from disinterested: Steinach’s theories were of immense practical and rhetorical use in his own program. In debates with orthodox physicians, some of whom (such as the psychiatrist Emil Kraepelin) continued to believe that homosexuality could be acquired after seduction and should not, therefore, be decrim-

⁶⁴ Albert Moll, *Behandlung der Homosexualität: Biochemisch oder psychisch?* (Bonn: Marcus & Weber, 1921), pp. 15–16, 20–21; Robert Gaupp, “Das Problem der Homosexualität,” *Klin. Wochenschr.*, 1922, 1:1033–1038; Sigmund Freud, *Three Essays on the Theory of Sexuality* (1905), in *Standard Edition*, ed. Strachey et al. (cit. n. 17), Vol. 7 (1953), pp. 123–245, on p. 147 (this comment was added in 1920); and Freud, “Psychogenesis” (cit. n. 17), pp. 171–172. Freud added, however, that impressive as it was, Steinach’s treatment was relevant only to those cases presenting with “a very patent physical ‘hermaphroditism.’”

⁶⁵ On early enthusiasm for transplantation see Robert Lichtenstern, “Bisherige Erfolge der Hodentransplantation beim Menschen,” *Jahreskurse für Ärztliche Fortbildung*, 1920, 11(4):8–11; Richard Mühsam, “Der Einfluß der Kastration auf Sexualneurotiker,” *Deutsche Medizinische Wochenschrift*, 1921, 47:155–156; and E. Kreuter, “Über Hodenimplantation beim Menschen,” *Zentralblatt für Chirurgie*, 1919, 46:954–956. On later problems see Mühsam, “Über die Beeinflussung des Geschlechtslebens durch freie Hodenüerpflanzung,” *Deut. Med. Wochenschr.*, 1920, 46:823–825; and Mühsam, “Chirurgische Eingriffe bei Anomalien des Sexuallebens,” *Therapie der Gegenwart*, 1926, 67:451–455, on p. 451.

⁶⁶ A surgeon in Erlangen, for instance, transplanted a testicle from a homosexual into a heterosexual who had been bilaterally castrated for undisclosed reasons. The subject failed to develop homosexual leanings and the grafted testis was histologically normal. See E. Kreuter, “Hodentransplantation und Homosexualität,” *Zentralbl. Chir.*, 1922, 49:538–540.

⁶⁷ Magnus Hirschfeld, “Operative Behandlung der Homosexualität,” *Vierteljahresber. Wissen.-Human. Kom./Jahrb. Sex. Zwischenst.*, 1917, 17:189–190; Hirschfeld, “Hodenbefunde bei intersexuellen Varianten,” *Arch. Frauenk. Eugen.*, 1921, 7:173–174, on p. 174; and Hirschfeld, *Homosexualität*, p. xiv. A Hirschfeld associate attempted to save Steinach’s hypothesis by arguing that a secretory anomaly was not necessarily accompanied by a microscopically visible structural anomaly and that other endocrine glands besides the gonads (such as the adrenals) could be involved in causing homosexuality. See Walter Grossman, “Endokrine und psychische Mechanismen in der Ätiologie der Sexualinversion,” *Zeitschrift für die Gesamte Neurologie und Psychiatrie (Originalien)*, 1920, 62:309–332, on pp. 319–323.

inalized, Hirschfeld responded by citing Steinach's "demonstration" of the innate biological nature of homosexuality. Homosexuality could never be acquired unless one's biology had already made one a homosexual.⁶⁸ The absence of confirmatory evidence for Steinach's theory soon made these claims sound quite weak. When the not overtly unsympathetic psychiatrist Kurt Blum reviewed a large sample of all applicable studies in 1923, he concluded that Steinach's endocrine theory of homosexuality had failed to find any convincing confirmation; this, Blum emphasized, meant that Hirschfeld's congenitalist view of homosexuality, too, remained unproven. Hirschfeld finally lapsed into silence, commenting cryptically in later years that hopes of applying the results of animal experiments to human beings had frequently proved illusory. In one of his last major works, he transcribed without comment the following passage from the letter of a patient who had undergone the Steinach transplantation but remained homosexual in orientation: "The value of Steinach's gland transplantation was greatly overvalued in medical circles of those times. I have examined the literature without finding a single case in which the transplantation produced a lasting effect."⁶⁹

Hirschfeld's whole project of homosexual emancipation, in any case, came to an end with the Nazi takeover of Germany: his institute was ransacked by thugs, his books and records burnt, and he ended his life in exile in France. No legal reforms of any importance were instituted in Germany until well after World War II—and then for reasons not directly connected with science. Steinach had quickly moved on to other projects and controversies in the early 1920s and later successfully downplayed his involvement in the issue.⁷⁰ Rejuvenation came to be seen as Steinach's greatest achievement (and, later, his greatest folly), while his "cure" for homosexuality was relegated to obscurity in the company of his innovative animal experiments.

"NEW MEN," "NEW WOMEN," "NEW HERMAPHRODITES": GENDER AND IDENTITY AT THE FIN DE SIÈCLE

As far as concrete results were concerned, then, the glandular theory of homosexuality proved to be a resounding failure in conceptual as well as sociopolitical terms, although endocrinological explanations of homosexuality were to re-emerge, of course, in various forms in later times, including our own. From a purely presentist perspective, one could see the Steinach-Hirschfeld hypothesis as a flawed but pioneering contribution to this field of research.⁷¹ Historians, however, have more to learn from examining *why* Steinach's

⁶⁸ See Magnus Hirschfeld, "Ist die Homosexualität körperlich oder seelisch bedingt?" *München. Med. Wochenschr.*, 1918, 65:298–299. This was a rebuttal of the eminent psychiatrist Emil Kraepelin's assertion that the German nation was being weakened by the "spread" of homosexuality. See Kraepelin, "Geschlechtliche Verirungen" (cit. n. 11).

⁶⁹ Kurt Blum, "Homosexualität und Pubertätsdrüse," *Zentralblatt für die Gesamte Neurologie und Psychiatrie*, 1923, 31:161–168, on p. 167; and Magnus Hirschfeld, *Geschlechtskunde*, 5 vols., Vol. 3 (Stuttgart: Püttmann, 1930), pp. 25, 537.

⁷⁰ See Steinach and Loebel, *Sex and Life* (cit. n. 34), pp. 89–92.

⁷¹ This claim has actually been made by the German sexologist Gunter Dörner; see Gunter Dörner *et al.*, "Gene- and Environment-Dependent Neuroendocrine Etiogenesis of Homosexuality and Transsexualism," *Experimental and Clinical Endocrinology*, 1991, 98:141–150, on p. 142. For Dörner's own endocrine theory of homosexuality see his *Hormones and Brain Differentiation* (Amsterdam: Elsevier, 1976). Dörner's theories were also related directly to Steinach's in Schmidt, "Allies and Persecutors" (cit. n. 3). For reviews of recent biological research on homosexuality see Francis Mark Mondimore, *A Natural History of Homosexuality* (Baltimore: Johns Hopkins Univ. Press, 1996), pp. 97–146; and Chandler Burr, *A Separate Creation: How Biology Makes Us Gay* (London: Bantam, 1996). For a political critique see Hilary Rose, "Gay Brains, Gay Genes, and Feminist Science Theory," in *Sexual Cultures: Communities, Values, and Intimacy*, ed. Jeffrey Weeks and Janet Holland (London: Macmillan, 1996), pp. 53–72.

glandular theory of homosexuality seemed so intellectually illuminating to Hirschfeld and so likely to be strategically useful. What, in other words, were the contexts—personal, intellectual, social, cultural-political, biomedical—within which such a theory was perceived to be meaningful?

By the turn of the century, the medical profession had acquired considerable hegemony over discourses on sexuality and sexual behavior. To say this is not, of course, to imply that the social control of sexuality had passed entirely into medical hands. The state still paid far more attention to its laws, antiquated though they might seem to physicians, than to medical discourse: the retention of Paragraph 175 in the face of virtually universal medical opposition would otherwise be inexplicable. It is essential to appreciate, however, that although hindsight allows us to see that fin-de-siècle medical science was not powerful enough to replace legal, social, and cultural traditions, that particular truth was not necessarily obvious to contemporaries, especially to such fervent believers in positivistic notions of progress as Hirschfeld and his associates. For them, “Science” was the ultimate authority to appeal to in their quest for social and moral justice. A biomedical argument for the decriminalization of homosexuality made good tactical sense within their ideology and within the specific contexts of the period. It was not the only possible tactic, certainly, but *prima facie* sounder and more likely to be effective than the alternatives. Its failure, in other words, could not be predicted with any certainty from Hirschfeld’s vantage point, and success seemed, if not easily attainable, then at least possible in the long run.

The argument advanced by the Scientific-Humanitarian Committee, moreover, harmonized perfectly with traditional norms of gender: male homosexuals desired men not because they were vicious or diseased, but because they were partly feminine. And they were “feminine” not in a merely metaphorical fashion but, as persuasively demonstrated by the experiments of a well-known laboratory scientist with no direct involvement in the cultural politics of homosexual emancipation, morphologically and psychologically feminized by inappropriately high quantities of circulating “female” secretions. Homosexuals, to be sure, constituted a “third sex”; but this third sex, rather than being a category alien to the natural order, was merely a combination of the two established genders. The coexistence of masculinity and femininity in the body and mind of the homosexual did not involve any redefinition of those qualities. Even though sexual intermediacy was “universal,” male and female remained distinct, separate, complementary qualities, endowed with all their traditional attributes. It was the distribution of maleness and femaleness in individuals that Hirschfeld tried to redefine: the qualities themselves he left strictly alone and, indeed, helped reinforce. Many individual men became less masculine in his theory, but that did not in any way undermine the fundamental, abstract concept of masculinity or cast doubt on its social desirability.

Gert Hekma has recently asserted that Hirschfeld’s theory ensured that “homosexuals won in respectability what they lost in masculinity.”⁷² This, indeed, was how some contemporaries of Hirschfeld regarded his achievements. Scorning the authority of science, a fairly small but vocal group of homosexual activists, some of whom were initially close to Hirschfeld, eventually rejected what they saw as his illegitimate feminization of a gloriously masculine way of life and love, sanctioned by the wisdom of centuries. Unlike the Scientific-Humanitarian Committee, this group was by and large imbued with classical rather than scientific ideals, and many of them were driven by an anarchistic spirit: the

⁷² See Hekma, “‘Female Soul in a Male Body’” (cit. n. 24), p. 235.

resurrection of the ancient Hellenic ideal of male love in the name of personal freedom was a recurring motif in their texts.

Their conceptualization of homosexual desire as a sign of true masculinity, although a historian has recently traced it to the old Germanic tradition of romantic friendship between men, was, indeed, incomparably more radical than Hirschfeld's and scandalously divergent from contemporary norms of masculinity. If the male homosexual was a true man rather than a biological freak, then the very concept of masculinity was in jeopardy. And for some members of this group, not simply masculinity but the whole concept of sexual relations needed to be rethought. Benedict Friedländer (1866–1908), a biologist who rejected Hirschfeld's theories, declared that "the tabu of same-sex love among men contributes very essentially to the improper absolute rule of woman-love, to the suppression of male friendship, and thereby to a feminization of the whole culture." Friedländer's anti-feminism was not universally shared by other members of the group, but they were unanimous in their valorization of a true homosexual masculinity. Nor did they find Hirschfeld's biological vision of gender at all plausible. The physician Edwin Bab, for example, asserted that a tomboyish girl who liked climbing trees was "simply uncommonly wild" and not, as Hirschfeld would claim, biologically masculinized. "Merely rearing and habit," stated Bab, "cause boys to prefer soldiers and girls dolls, cooking stoves, and such as play-things."⁷³ Despite their important differences in focus and nuance, these critics of Hirschfeld were arguing for a sweeping reevaluation of the concepts of masculinity and femininity and not simply for the emancipation of homosexuals. Whatever one might think of the social or moral worth of that project, it was historically less likely to impress contemporary society and the state than Hirschfeld's moderate proposals for reform and reconceptualization. Unlike Hirschfeld's views, which were discussed widely in medical texts and attained some prominence, however temporary, in the sociopolitical arena, the writings of his opponents remained on the fringe, ignored (or persecuted) at first and then essentially forgotten until the recent boom in scholarly studies on the history of homosexuality. To paraphrase Hekma, one might say that these activists wished to gain masculinity for the homosexual at the expense of respectability. Their demand for masculinity, however, was so scornful of contemporary norms of gender and so Hellenistically aloof from the discourses of contemporary law and medicine that the project was doomed to failure from its inception.

The far more conventional Hirschfeld was a shrewder tactician, and he could hardly have found a more attractive scientific ally than Steinach. Steinach argued, of course, that masculinity and femininity were not immutable qualities that one was born with but, rather, morphological and psychological attributes that developed under the influence of glandular secretions. Males, then, could be feminized and females virilized by glandular manipulations; this, certainly, was a claim subversive of traditional social certainties. What Steinach took away with one hand, however, he gave with the other. His research on rejuvenation (which demands far more extensive exploration than I have been able to attempt here) and his "cure" of homosexuality had the same fundamental goal: the restitution of masculinity, as defined traditionally by science and society. True males were strong, energetic, active, courageous, creative, libidinous, and heterosexual. That these were glandular phenomena

⁷³ Harry Oosterhuis, "Homosexual Emancipation in Germany before 1933: Two Traditions," *J. Homosexual.*, 1991, 22:1–27, on pp. 8–12; Benedict Friedländer, "Memoir for the Friends and Contributors of the Scientific-Humanitarian Committee in the Name of the Secession of the Scientific-Humanitarian Committee" (1907), trans. Hubert Kennedy, *ibid.*, pp. 71–84, on p. 76; and Edwin Bab, "Same-Sex Love, or *Lieblingminne*: A Word on Its Essence and Significance" (1903), *ibid.*, pp. 53–69, on p. 63.

rather than immutable givens was, in the final analysis, no reason to cease believing in the categories of “male” and “female” or in the normativeness of heterosexuality. Gender, to be sure, was a mere matter of secretions, but as long as science could control those secretions an ideal world of virile heterosexual men and, by implication, feminine heterosexual women was well within reach. Hirschfeld used Steinach’s findings to validate his own biomedical construction of a new homosexual identity that was neither wholly male nor wholly female but was in no way a threat to conventional definitions of masculinity and femininity. Apart from illustrating the impact of the new science of endocrinology on long-standing medical and cultural issues, the intellectual collaboration of Steinach and Hirschfeld shows how scientific research and broader political considerations can modulate the always complex and often tense relationship between the laboratory and the clinic.

Perhaps most important, however, the episode belongs with the debates on sexual identity raging in Central European cultures around the turn of the century. The writers Arthur Schnitzler and August Strindberg, the cultural critics Karl Kraus and Otto Weininger, the feminist theorist Rosa Mayreder, and the physician Sigmund Freud, in their own ways, constructed, deconstructed, hailed, and castigated the “new woman,” the “new mother,” and what James Joyce, in a somewhat different context, would immortalize as the “new womanly man.” The signs and meanings of masculinity and femininity were in flux: a heroic masculine age had been succeeded, to use the words of Karl Kraus, by a “vaginal epoch” (*vaginales Zeitalter*).⁷⁴

This sense of apocalypse was greatly heightened and at least partly generated by contemporary feminist activism. The successes of feminism were, of course, still quite negligible, but the very fact that women were beginning to demand such quintessentially male prerogatives as sexual freedom, political rights, higher education, and entry into the professions suggested that women were becoming masculine and men effeminate and decadent. It was the end of civilization as the intellectuals knew it, and the specter of feminism encouraged much misogyny as well as new, anxious quests for the meaning of masculinity. Not simply an age of antifeminism, the turn of the century was marked also by quasi-Nietzschean quests for a “pure, healthy, and authentic” masculinity, some of which would later, in Central Europe at least, flow quite naturally into nationalistic and fascist channels.⁷⁵ Steinach himself does not seem to have been nationalistic or fascist, but his preoccupation with the replenishment of masculinity was crucially shaped by the social and existential concerns of his era.

As the old categories of gender came under threat, strategies evolved to construct new identities while reinforcing or undermining old ones. Historians have not adequately appreciated the diversity of roles that biomedical discourse played in those redefinitions. While it has been shown repeatedly how biological arguments were used to negate demands for autonomy (most notably, demands for female autonomy), rather less attention

⁷⁴ James Joyce, *Ulysses* (New York: Modern Library, 1961), p. 493; and Karl Kraus, in *Die Fackel*, 1913, 389–390:38. For an analysis see Wagner, *Geist und Geschlecht* (cit. n. 35), pp. 152–157. Of the innumerable studies of concepts of gender in fin-de-siècle Central Europe, I found the following especially useful in analyzing the issues emphasized here: Bloch, *Sexualleben* (cit. n. 12); Gail Finney, *Women in Modern Drama: Freud, Feminism, and European Theater at the Turn of the Century* (Ithaca, N.Y.: Cornell Univ. Press, 1989); Jacques Le Rider, *Modernity and Crises of Identity: Culture and Society in Fin-de-Siècle Vienna* (New York: Continuum, 1993); and Michael Worbs, *Nervenkunst: Literatur und Psychoanalyse im Wien der Jahrhundertwende* (Frankfurt am Main: Europäische Verlagsanstalt, 1983).

⁷⁵ See Maurizia Boscagli, *Eye on the Flesh: Fashions of Masculinity in the Early Twentieth Century* (Oxford: Westview, 1996), esp. pp. 1–6; and George L. Mosse, *Nationalism and Sexuality: Respectability and Abnormal Sexuality in Modern Europe* (New York: Fertig, 1985).

has been bestowed on the historical fact that in other contexts one could appeal to biology in order to affirm identity and demand autonomy without actually subverting the conceptual power of traditional ideas of male and female. The fact that Hirschfeld's project failed to reach its goal does not in any way diminish its importance for historians concerned with ideas of gender and sexuality: we cannot fully understand the complexities of the cultural politics of identity at the fin de siècle unless we investigate *why* a project like Hirschfeld's was conceived in the way it was and *how* it elaborated and validated its arguments.