

RESEARCH ARTICLE

The big picture of sexual science

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Abstract

This article identifies a few paradigmatic ways whereby the big picture of sexual science has been made possible, especially through a diversification in the uneven but interconnected geography of scientific practice. It focuses on the ways in which the life and work of individual researchers, institutional settings and journal circulations have anchored the development of narratives about the history of sexual science. By delineating the shifting cultural geography, epistemological premise and conceptual innovations in sexological research, it is possible to cast the co-constituted nature of knowledge making as an enterprise simultaneously local and global in its reach. The rise of modern sexual science represented as much a gestalt counterpart to the evolutionary paradigm as a response to the shifting terrains of religious and legal governance in the regulation of sexuality.

When the *British Journal for the History of Science* published a special issue on the theme of *The Big Picture* over three decades ago, it included an article devoted to gender analysis by Ludmilla Jordanova.¹ Comprehensive in scope and authoritative in tone, Jordanova's essay highlighted the ways in which 'gender' yields different points of entry into the historiography of science. Jordanova reminded her reader that an analytical attention on gender is not to be conflated with an interpretive focus on women. 'Gender' is not 'women'.² By 1993, the year in which the *BJHS* special issue on the big picture appeared, much work in feminist theory had transformed historiographical conversations on science beyond the simple goal of inclusion; that is, adding women's voices and experience to historical narratives.³ As Jordanova observed, though documenting the increasing and evolving role of women in science is important, it remains a project separate from treating gender as a robust analytical category for understanding the way power operates along the time-space axis of history and historiography. A gender history perspective helps to illuminate the constructed nature of science, and, vice versa, a history-of-science perspective elucidates the fabricated nature of gender constructs.⁴

1 Ludmilla Jordanova, 'Gender and the historiography of science', *BJHS* (1993) 26, pp. 469–83.

2 Joan Wallach Scott, *Gender and the Politics of History*, New York: Columbia University Press, 1988.

3 Londa Schiebinger, *The Mind Has No Sex? Women in the Origins of Modern Science*, Cambridge, MA: Harvard University Press, 1989; Evelyn Fox Keller and Helen E. Longino (eds.), *Feminism and Science*, Oxford: Oxford University Press, 1996; Angela N.H. Creager, Elizabeth Lunbeck and Londa Schiebinger (eds.), *Feminism in Twentieth-Century Science, Technology and Medicine*, Chicago: The University of Chicago Press, 2001.

4 Thomas Laqueur, *Making Sex: Body and Gender from the Greeks to Freud*, Cambridge, MA: Harvard University Press, 1990; Londa Schiebinger, *Nature's Body: Gender in the Making of Modern Science*, New Brunswick, NJ:

This essay adds the variable of sexuality to reflect on the mutual production of science and social difference.⁵ While many of Jordanova's original insights remain useful today, I incorporate sexuality as a more explicit category of analysis and, in the spirit of this issue, cast a wider geocultural net to chart some tentative contours of the big picture of sexual science. In addition to integrating more non-Western and global perspectives, this essay draws on a historiography of science in which the experience of gender and sexual minorities has been most representatively highlighted. An important turning point – or culmination point, as the case may be – in this subfield is marked by the publication of *A Global History of Sexual Science, 1880–1960*, co-edited by Veronika Fuechtner, Douglas E. Haynes and Ryan M. Jones.⁶ For the first time, historians of sexology came together to think collectively about the broader implications of their regional case studies and local histories. If Linda Gordon is correct that 'historical thinking develops through a constant interplay between monographs and syntheses', my goal in this synthetic essay is not to present an exhaustive review of the historiography of sexual science.⁷ While attempting to accomplish such a task to a limited degree, I am more interested in identifying a few paradigmatic ways whereby the big picture of sexual science, however conditional, has been made possible, especially through a diversification in the uneven but interconnected geography of scientific practice. I argue that innovations in modern sexual science represented as much a by-product of the revolution in evolutionism as a response to the shifting terrains of religious and legal governance in the regulation of sexuality.

A principal way in which the big picture of sexual science has been told is done through the life and pioneering work of individual sexologists. In the late nineteenth century, the Jewish physician Magnus Hirschfeld (1868–1935) carried out a scientific programme of sex reform that challenged the social stigmatization of homosexuality and gender variance.⁸ Although earlier writers, including Karl Heinrich Ulrichs (1825–95) and Richard von Krafft-Ebing (1840–1902), had made important inroads into sexology,

Rutgers University Press, 1993; Alice Domurat Dreger, *Hermaphrodites and the Medical Invention of Sex*, Cambridge, MA: Harvard University Press, 1998; Anne Fausto-Sterling, *Sexing the Body: Gender Politics and the Construction of Sexuality*, New York: Basic Books, 2000; Elizabeth Reis, *Bodies in Doubt: An American History of Intersex*, Baltimore: Johns Hopkins University Press, 2009; Geertje Mak, *Doubting Sex: Inscriptions, Bodies and Selves in Nineteenth-Century Hermaphrodite Case Histories*, Manchester: Manchester University Press, 2012; Sandra Eder, *How the Clinic Made Gender: The Medical History of a Transformative Idea*, Chicago: The University of Chicago Press, 2022.

5 Nelly Oudshoorn, *Beyond the Natural Body: An Archeology of Sex Hormones*, New York: Routledge, 1994; Roy Porter and Lesley Hall, *The Facts of Life: The Creation of Sexual Knowledge in Britain, 1650–1950*, New Haven, CT: Yale University Press, 1995; Vernon Rosario (ed.), *Science and Homosexualities*, New York: Routledge, 1996; Lucy Bland and Laura Doan (eds.), *Sexology in Culture: Labelling Bodies and Desires*, Chicago: The University of Chicago Press, 1998; Adele Clarke, *Disciplining Reproduction: Modernity, American Life Sciences, and 'the Problems of Sex'*, Berkeley: University of California Press, 1998; Jennifer Terry, *An American Obsession: Science, Medicine, and Homosexuality in Modern Society*, Chicago: The University of Chicago Press, 1999; Vernon Rosario, *Homosexuality and Science: A Guide to the Debates*, Santa Barbara: ABC-CLIO, 2002; Chandak Sengoopta, *The Most Secret Quintessence of Life: Sex, Glands, and Hormones, 1850–1950*, Chicago: The University of Chicago Press, 2006; Sarah S. Richardson, *Sex Itself: The Search for Male and Female in the Human Genome*, Chicago: The University of Chicago Press, 2013; Katie Sutton, *Sex between Body and Mind: Psychoanalysis and Sexology in the German-Speaking World, 1890s–1930s*, Ann Arbor: University of Michigan Press, 2019.

6 Veronika Fuechtner, Douglas Haynes and Ryan M. Jones (eds.), *A Global History of Sexual Science, 1880–1960*, Oakland: University of California Press, 2018.

7 Linda Gordon, 'Black and white visions of welfare: women's welfare activism, 1890–1945', *Journal of American History* (1991) 78, pp. 559–90, 561.

8 Charlotte Wolff, *Magnus Hirschfeld: A Portrait of a Pioneer in Sexology*, London: Quartet, 1986; Simon LeVay, *Queer Science: The Use and Abuse of Research into Homosexuality*, Cambridge, MA: MIT Press, 1997; Elena Mancini, *Magnus Hirschfeld and the Quest for Sexual Freedom: A History of the First International Sexual Freedom Movement*, New York: Palgrave Macmillan, 2010; Robert Beachy, *Gay Berlin: Birthplace of a Modern Identity*, New York:

Hirschfeld stood out for building a far-reaching political campaign, including petitioning to overturn Paragraph 175 in Germany and changing the minds of doctors like Krafft-Ebing who initially considered homosexuality a disease.⁹ Perhaps the most important clue to the way Hirschfeld sat at the centre of an international network of sexual science was the world tour he took in 1932 to lecture in the United States, China, Japan, India, the Philippines, Indonesia, Egypt and Palestine.¹⁰ Hirschfeld's view of gender and racial violence evolved both before and after the tour.¹¹

By the mid-twentieth century, the centre of gravity in sexological research had shifted to the United States, where the work of zoologist Alfred Kinsey (1894–1956) acquired international acclaim.¹² Kinsey's findings inspired experts in both the Western and the non-Western worlds to conduct similar sex survey research.¹³ He reached out to relevant organizations to acquire literature and books for the 'Oriental section' of his sex library. In a letter addressed to the Book Department of the Yellow Hall, with branches in New York and Shanghai, Kinsey wrote in October 1948, 'We should be very glad to procure additional Chinese books which have anything to do with sex, treated either scientifically or as a matter of literature or pornography.'¹⁴ In the 1950s, Kinsey's research team received at least two inquiries from Hong Kong about the prospect of sending him materials. One collection contained 'material on the sex life of the Chinese (more male than female) and also of the Filipinos. Additionally, information has been collected on the sex life of other East and Southeast Asian peoples'.¹⁵ The Kinsey group sent a staff member to meet with this potential donor in Hong Kong in December 1956, although the trail of record about this potential donation concluded here in the archive.¹⁶ In November 1959, Anthony Lee, another individual from Hong Kong, revealed that he had been 'investigating information about this colony's sexological problems, sex crimes, prostitutes, and other related matter ... If there is anything, regarding sex, I can be of service to you, please let me know'.¹⁷ Alongside Kinsey, two other

Alfred A. Knopf, 2014; Ralf Dose, *Magnus Hirschfeld: The Origins of the Gay Liberation Movement*, New York: Monthly Review Press, 2014.

9 James D. Steakly, *The Homosexual Emancipation Movement in Germany*, Salem: Ayer, 1975; Harry Oosterhuis, *Stepchildren of Nature: Krafft-Ebing, Psychiatry, and the Making of Sexual Identity*, Chicago: The University of Chicago Press, 2000; Hubert Kennedy, *Karl Heinrich Ulrichs: Pioneer of the Modern Gay Movement*, San Francisco: Peremptory Publications, 2002; Laurie Marhoefer, *Sex and the Weimar Republic: German Homosexual Emancipation and the Rise of the Nazis*, Toronto: University of Toronto Press, 2015; Ralph M. Leck, *Vita Sexualis: Karl Ulrichs and the Origins of Sexual Science*, Urbana: University of Illinois Press, 2016; Douglas Pretsell, *The Correspondence of Karl Heinrich Ulrichs, 1946–1894*, Cham: Palgrave Macmillan, 2020.

10 Magnus Hirschfeld, *Men and Women: The World Journey of a Sexologist*, New York: G.P. Putnam's Sons, 1935.

11 Heike Bauer, *The Hirschfeld Archives: Violence, Death, and Modern Queer Culture*, Philadelphia: Temple University Press, 2017, especially pp. 102–24.

12 Regina Morantz, 'The scientist as sex crusader: Alfred C. Kinsey and American culture', *American Quarterly* (1977) 29, pp. 563–89; Stephanie H. Kenen, 'Who counts when you are counting homosexuals? Hormones and homosexuality in mid-twentieth-century America', in Vernon Rosario (ed.), *Science and Homosexualities*, New York: Routledge, 1996, pp. 197–218; James H. Jones, *Alfred C. Kinsey: A Public-Private Life*, New York: W. W. Norton, 1997; Jonathan Gathorne-Hardy, *Sex the Measure of All Things: A Life of Alfred C. Kinsey*, Bloomington: Indiana University Press, 2000; Donna Drucker, *The Classification of Sex: Alfred Kinsey and the Organization of Knowledge*, Pittsburgh: University of Pittsburgh Press, 2014.

13 L.R. England, 'Little Kinsey: an outline of sex attitudes in Britain', *Public Opinion Quarterly* (1949) 13, 587–600; Tetsu Takahashi, *Reports of Sexual Experiences: Confessions of One Thousand Well-Educated Japanese*, vol. 1 (tr. Nobuo Tachibana), Tokyo: Amatoria, 1953.

14 Alfred Kinsey to Paul Neuman, 30 November 1948, Kinsey Era Correspondence (1947–56), the Kinsey Institute Archives Collection, the Kinsey Institute for Research in Sex, Gender, and Reproduction, Indiana University, Bloomington (hereafter KI).

15 Eric Halpern to Alfred Kinsey, 21 August 1956, Kinsey Era Correspondence (1947–56), KI.

16 Eleanor L. Roehr to Eric Halpern, 21 November 1956, Kinsey Era Correspondence (1947–56), KI.

17 Anthony Lee to Paul Gebhard, 18 November 1959, Kinsey Era Correspondence (1947–56), KI.

scientists critically reoriented sexuality in the mid-twentieth century. Endocrinologist Harry Benjamin's (1885–1986) research on transsexualism and psychologist John Money's (1921–2006) development of the gender concept and the Hopkins protocols on intersex management cemented the spotlight on North America in the field of sex research.¹⁸ Transsexuality, through the story of Christine Jorgensen (1926–89) and her collaboration with Benjamin, entered the international limelight in the 1950s.¹⁹ Even though the works of Kinsey, Benjamin and Money were not the only sexological studies to attract attention in the mid-century, they served as a major frame of reference for subsequent dialogues on sexual variation in global science. Through the intellectual biography of individual sex researchers, historians have been able to delineate broader trends in the changing cultural geography of sexual science.

Recent studies have diversified this big picture by bringing to focus a worldwide cast of sex researchers. Most of these thinkers were either previously ignored or under-acknowledged. In the German-speaking world, women sexologists such as Helene Stocker (1869–1943), Ruth Bré (1862–1911), and Grete Meisel-Hess (1879–1922) made original contributions to empower female subjectivity and stress the importance of women's control over their own bodies.²⁰ Questions about race and empire shaped the tenor of Hirschfeld's work, and the key individual who mediated this process was Li Shiu Tong (1907–93), Hirschfeld's disciple/lover and a sexologist in his own right.²¹ In Republican China, Zhang Jingsheng (1888–1970) and Pan Guangdan (1898–1967) infused modern sexology with a eugenics agenda.²² In imperial Japan, biologist Yamamoto Senji (1889–1929) popularized sexual knowledge by translating foreign terms, especially from German, and addressing the sexual concerns of Japanese men and women.²³ In 1953, Takahashi Tetsu (1907–71), a follower of Yamamoto, published his own sex report based on surveys he conducted with a thousand educated individuals.²⁴ Italian endocrinologist Nicola Pende (1880–1970), Spanish physician Gregorio Marañón (1887–1960) and Latvia-born Chilean doctor Alexander Lipschütz (1883–1980) promoted the study of sex hormones in the Latin world.²⁵ Raghunath Dhondo Karve (1882–1953), Alliyapan Padmanabhan Pillay

18 Bernice L. Hausman, *Changing Sex: Transsexualism, Technology, and the Idea of Gender*, Durham, NC: Duke University Press, 1995; Joanne Meyerowitz, *How Sex Changed: A History of Transsexuality in the United States*, Cambridge, MA: Harvard University Press, 2002; Eder, op. cit. (4).

19 Howard Chiang, *Transtopia in the Sinophone Pacific*, New York: Columbia University Press, 2021, pp. 19–63.

20 Kirsten Leng, *Sexual Politics and Feminist Science: Women Sexologists in Germany, 1900–1933*, Ithaca, NY: Cornell University Press, 2018.

21 Laurie Marhoefer, *Racism and the Making of Gay Rights: A Sexologist, His Student, and the Empire of Queer Love*, Toronto: University of Toronto Press, 2022.

22 Charles L. Leary, 'Intellectual orthodoxy, the economy of knowledge and the debate over Zhang Jingsheng's *Sex Histories*', *Republican China* (1993) 18, pp. 99–137; Frank Dikötter, *Sex, Culture and Modernity in China: Medical Science and the Construction of Sexual Identities in the Early Republican Period*, Hong Kong: Hong Kong University Press, 1995; Dikötter, *Imperfect Conceptions: Medical Knowledge, Birth Defects, and Eugenics in China*, New York: Columbia University Press, 1998; Yuehtsen Juliette Chung, *Struggle for National Survival: Eugenics in Sino-Japanese Contexts, 1896–1945*, New York: Routledge, 2002; Howard Chiang, *After Eunuchs: Science, Medicine, and the Transformation of Sex in Modern China*, New York: Columbia University Press, 2018; Y. Yvon Wang, *Reinventing Licentiousness: Pornography and Modern China*, Ithaca, NY: Cornell University Press, 2021.

23 Sabine Frühstück, *Colonizing Sex: Sexology and Social Control in Modern Japan*, Berkeley: University of California Press, 2003.

24 Mark McLelland, 'Takahashi Tetsu and popular sexology in early postwar Japan, 1945–1970', in Fuechtner, Haynes and Jones, op. cit. (6), pp. 211–31.

25 Chiara Beccalossi, 'Latin eugenics and sexual knowledge in Italy, Spain, and Argentina: international networks across the Atlantic', in Fuechtner, Haynes and Jones, op. cit. (6), 305–29; Kurt MacMillan, "'Forms so attenuated that they merge into normality itself': Alexander Lipschütz, Gregorio Marañón, and theories of intersexuality in Chile, circa 1930', in Fuechtner, Haynes and Jones, op. cit. (6), pp. 330–52; Silvana Vetö and Marcelo Sánchez, 'Sigmund Freud and Alejandro Lipschütz: Psychoanalysis and biology between Europe and Chile', *History of the Human Sciences* (2017) 30, pp. 7–31.

(1890–1956), Yashoda Devi and even Mahatma Gandhi promulgated different visions of sexual science in India.²⁶ This list is only the tip of the iceberg, and it gestures toward the dynamic ways in which the global geography of sexual science must remain open to interpretation and revision.

Institutions formed another major cornerstone in the modern scientific study of sexuality. This followed directly from the endeavours of individual sex researchers. Between 1919 and 1933, Hirschfeld opened the Institute for Sexual Science in Berlin; founded in 1947, the Kinsey Institute exists today as part of Indiana University in Bloomington. Most exemplary of their kind, both non-profit institutes distinguished themselves as a home for scientists to deepen research on gender and sexuality. The Berlin institute opened the doors of its library to sex researchers, served as a clinic for treatment for various sexual matters (including gender reassignment), offered education to both experts and laypersons and emboldened transatlantic gay activism.²⁷ Hirschfeld hosted visitors from around the world who were inspired by him and based the Scientific–Humanitarian Committee, the first LGBT rights organization in history, which Hirschfeld had run since 1897, at his institute. Following the example of Hirschfeld’s private establishment, the Institute for Sexual Pathology, the world’s first public institute in sexology, was founded in Czechoslovakia in 1921.²⁸ Kinsey directed his Institute for Sex Research from 1947 until his death in 1956, and it served as the institutional base for his empirical research, which culminated in *Sexual Behavior in the Human Male* (1948) and *Sexual Behavior in the Human Female* (1953).²⁹ Today the Kinsey Institute contains the largest library and archival collection related to sex, gender and reproduction in the world.

Overlapping with individual researchers and institutions, professional journals offered a different angle in the big picture of sexual science, especially with respect to the bridging of local and global currents in knowledge making. In Europe, Hirschfeld’s Scientific–Humanitarian Committee published the *Yearbook of Sexual Intermediaries* from 1899 to 1933. It featured essays by Hirschfeld’s international visitors from the Soviet Union, Japan and beyond.³⁰ In the United States, New York-based polymath Hugo Gernsback (1884–1967) founded *Sexology*, which appeared in print from 1933 to 1983. Some of the early pioneers in transsexual medicine, including David Cauldwell (1897–1959) and Benjamin,

26 Sanjam Ahluwalia, ‘“Tyranny of orgasm”: global governance of sexuality from Bombay, 1930s–1950s’, in Fuechtner, Haynes and Jones, op. cit. (6), pp. 353–73; Shrikant Botre and Douglas E. Haynes, ‘Understanding R.D. Karve: Brahmacharya, modernity, and the appropriation of global sexual science in western India, 1927–1953’, in Fuechtner, Haynes and Jones, op. cit. (6), pp. 163–85; Ishita Pande, ‘Time for sex: the education of desire and the conduct of childhood in global/Hindu sexology’, in Fuechtner, Haynes and Jones, op. cit. (6), pp. 279–302; Charu Gupta, ‘Vernacular sexology from the margins: a woman and a Shudra’, *South Asia: Journal of South Asian Studies* (2020) 43, pp. 1105–27; Douglas E. Haynes, ‘Gandhi, Brahmacharya and global sexual science, 1919–38’, *South Asia: Journal of South Asian Studies* (2020) 43, pp. 1163–78.

27 Jennifer Terry, *An American Obsession: Science, Medicine, and Homosexuality in Modern Society*, Chicago: The University of Chicago Press, 1999; Henry Minton, *Departing from Deviance: A History of Homosexual Rights and Emancipatory Science in America*, Chicago: The University of Chicago Press, 2001; Alex Bakker, Rainer Herrn, Michael Thomas Taylor and Annette F. Timm, *Others of My Kind: Transatlantic Transgender Histories*, Calgary: University of Calgary Press, 2020.

28 Kateřina Lišková, *Sexual Liberation, Socialist Style: Communist Czechoslovakia and the Science of Desire, 1945–1989*, Cambridge: Cambridge University Press, 2018, p. 13.

29 Alfred C. Kinsey, Wardell B. Pomeroy and Clyde E. Martin, *Sexual Behavior in the Human Male*, Philadelphia: W.B. Saunders, 1948; Alfred C. Kinsey, Wardell B. Pomeroy, Clyde E. Martin and Paul H. Gebhard, *Sexual Behavior in the Human Female*, Philadelphia: W.B. Saunders, 1953.

30 Gregory M. Pflugfelder, *Cartographies of Desire: Male–Male Sexuality in Japanese Discourse, 1600–1950*, Berkeley: University of California Press, 1999; Dan Healey, *Homosexual Desire in Revolutionary Russia: The Regulation of Sexual and Gender Dissent*, Chicago: The University of Chicago Press, 2001.

published their work in the journal.³¹ In Japan, the 1920s saw the blossoming of journals and magazines devoted to sexual topics, including *Sei* (Sex/Sexuality) (founded in 1920), *Sei no kenkyū* (Research on Sexuality) (1919), *Seiyoku to jinsei* (Sexual Drive and Man) (1920), *Seiron* (Theories on Sexuality) (1928), *Hentai seiyoku* (Perverse Sexuality) (1922) and *Sei to shakai* (Sexuality and Society) (1925).³² Among the best-known Chinese sexological periodicals in the 1920s and 1930s were *Xin wenhua* (New Culture), *Xing zazhi* (Sex Magazine), and *Xing kexue* (Sex Science).³³ The circulation of these publications connected readers in urban localities such as Shanghai and Beijing to global trends in sexual knowledge. In India, the two major sexological journals were the Marathi magazine *Samaj Swasthya* (Societal Health) edited by Karve from 1927 to 1953 and the *International Journal of Sexology* edited by Pillay from 1947 to 1955.³⁴ The latter turned Bombay into an unprecedented hub of sexual knowledge in the global South in the mid-twentieth century. These sexological journals not only served as the most immediate site where knowledge transmission occurred, but also provided evidence for the ways in which sexual science was intrinsically transcultural, or global, in origin.³⁵

Taken together, the dispersed regional histories of sexology converge on two major trends in the development of sexual science. First, across the board, the secondary literature attests to the growth of global sexual science as a response to previous legal and religious frameworks for the regulation of sexuality. The case studies from different nations seem to confirm Foucault's insight regarding the technology of the sexual self; that is, the relocation of sexual governance from the domain of criminal and legal jurisprudence to the modern discourses of science and medicine.³⁶ This was true in both colonial and non-colonial contexts and distinguished itself most explicitly starting from the last third of the nineteenth century. In Africa, Asia, Europe, Latin America, the Caribbean, the Middle East and North America, with some exceptions, medical and scientific authorities joined the policing of permissible sexual practices by defining the normal against the pathological. This historical pattern is especially meaningful in the larger narrative conventionally relayed about modern science. The general history of science saw a broad trend toward secularization in which various scientific 'discoveries' unsettled the time-honoured prestige of religion.³⁷ This trend arguably began with the Scientific Revolution (Copernicus, Galileo, Newton and so on), but in the nineteenth and twentieth centuries, with respect to the sexual sciences, it culminated in the Darwinian and Freudian revolutions.³⁸

On this point, a global historical viewpoint affords ample room also to think about how and why evolutionary thinking was important to the rise of modern sexual science in the nineteenth century. Part of it had to do with the shift from a romantic conception of nature (the role of 'archetypes' in building taxonomic knowledge across such fields as phrenology and physical anthropology) into the medicalization of sexuality (the

31 Joanne Meyerowitz, *How Sex Changed: A History of Transsexuality in the United States*, Cambridge, MA: Harvard University Press, 2002.

32 Sabine Frühstück, 'Managing the truth of sex in imperial Japan', *Journal of Asian Studies* (2000) 59, pp. 332–58, esp. 344.

33 Howard Chiang, 'Epistemic modernity and the emergence of homosexuality in China', *Gender and History* (2010) 22, pp. 629–57.

34 Ahluwalia, op. cit. (26); Botre and Haynes, op. cit. (26).

35 Veronika Fuechtner, Douglas Haynes and Ryan M. Jones, 'Toward a global history of sexual science: movements, networks, and deployments', in Fuechtner, Haynes and Jones, op. cit. (6), pp. 1–26.

36 Michel Foucault, *The History of Sexuality*, vol. 1, *An Introduction* (tr. Robert Hurley), New York: Vintage, 1990.

37 Angela Willey, 'Monogamy's nature: global sexual science and the secularization of Christian marriage', in Fuechtner, Haynes and Jones, op. cit. (6), pp. 97–117.

38 Thomas S. Kuhn, *The Structure of Scientific Revolutions*, Chicago: The University of Chicago Press, 1962.

sexologists of the late nineteenth century).³⁹ This shift toward scientific realism balanced an understanding of organic ontology as deeply holistic, isomorphic, developmental and non-reductionist, on the one hand, and the hardening grip of empirical clinical surveillance, on the other.⁴⁰ Pivotal to this shift, evolution handed naturalists a powerful way to explain the universal laws of nature (similar to the ways in which gravity helped to explain the physical world or combustion the chemical world). Throughout this period, the scientific study of sex was already the scientific study of race. Racial science and sexual science came together in the twin legacies of Enlightenment science: (1) the fixation on the material body as an indicator of human difference and (2) the interest in generating theories about the universal laws of nature under which biodiversity took shape. By the late nineteenth century, evolutionary theory allowed sexologists to investigate sexuality in a hierarchy of desirable traits that were often coded through racialized bodies.⁴¹ This cultural labour unfolded in an era of intensified industrialization and urbanization.⁴² Meanwhile, the history of sexual science critically arose as much out of colonial settings as out of the metropole. This was evident in the fieldwork of anthropologists in Africa, the fascination of anatomists with the ‘Hottentot apron’, and the intervention of doctors in the German Penal Code, Paragraph 51.⁴³

Given the significance of the pre-1870 materials I have alluded to, a caveat is necessary here. One drawback of the recent work done in the global history of sexual science is precisely the way it situates its narrative departure in the late nineteenth century. The break between the early modern and modern periods represents a prevailing feature across different geographical fields. As far as the big picture is concerned, cross-regional inquiry has often been executed at the expense of chronological depth (and, of course, the reverse is also true when one considers the classic studies of Thomas Laqueur, Charlotte Furth and Gregory Pflugfelder).⁴⁴ The kind of synthesis enumerated in this essay relies on multiple sources to consider the implications of theories of sex and desire in both Western and non-Western civilizations, from the ancient period to the early modern era. A separate body of work is helpful to trace the history of the natural sciences in the Enlightenment period and into the early nineteenth century.⁴⁵ But as soon as the issues of race, colonialism and evolutionary thinking surfaced as reigning tenets of sex research,

39 Robert J. Richards, *The Romantic Conception of Life: Science and Philosophy in the Age of Goethe*, Chicago: The University of Chicago Press, 2002. A critique of this view can be found in Michael Ruse, ‘The romantic conception of Robert J. Richards’, *Journal of the History of Biology* (2004) 7, pp. 3–23.

40 Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception* (tr. Alan M. Sheridan Smith), New York: Vintage, 1994.

41 Siobhan B. Somerville, *Queering the Color Line: Race and the Invention of Homosexuality in American Culture*, Durham, NC: Duke University Press, 2000.

42 Pablo Ben, ‘Global modernity and sexual science: the case of male homosexuality and female prostitution, 1850–1950’, in Fuechtner, Haynes and Jones, op. cit. (6), pp. 29–50.

43 Rebecca Hodes, ‘“Hottentot apron”: genital aberration in the history of sexual science’, in Fuechtner, Haynes and Jones, op. cit. (6), pp. 118–38; Ralph Leck, ‘Westermarck’s Morocco: sexology and the epistemic politics of cultural anthropology and sexual science’, in Fuechtner, Haynes and Jones, op. cit. (6), pp. 70–96; Robert Deam Tobin, ‘Sexology in the southwest: law, medicine, and sexuality in Germany and its colonies’, in Fuechtner, Haynes and Jones, op. cit. (6), pp. 141–62.

44 Thomas Laqueur, *Making Sex: Body and Gender from the Greeks to Freud*, Cambridge, MA: Harvard University Press, 1990; Charlotte Furth, *A Flourishing Yin: Gender in China’s Medical History, 960–1665*, Berkeley: University of California Press, 1999; Pflugfelder, op. cit. (30).

45 Charlotte Furth, ‘Androgynous males and deficient females: biology and gender boundaries in sixteenth- and seventeenth-century China’, *Late Imperial China* (1988) 9, pp. 1–31; Joan Cadden, *Meanings of Sex Difference in the Middle Ages: Medicine, Science, and Culture*, Cambridge: Cambridge University Press, 1993; Londa Schiebinger, *Nature’s Body: Gender in the Making of Modern Science*, New Brunswick, NJ: Rutgers University Press, 1993; Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences*, New York: Vintage, 1994; Paul Farber, *Finding Order in Nature: The Naturalist Tradition from Linnaeus to E.O. Wilson*, Baltimore: Johns Hopkins

the recent scholarship provides useful content for connecting these developments to the earlier periods.

Toward the middle of the twentieth century, the global spotlight began to shift to North America, but this transition occurred alongside other developments. One of the most obvious examples was the growing popularity of psychoanalysis across the world. When psychoanalysis, like theoretical physics, left continental Europe due to wartime pressure, it found a ready audience among psychiatrists based primarily in cities like New York, Chicago and Boston.⁴⁶ The American version of Freudianism and psychoanalysis was decidedly more conservative in its attitude toward sex.⁴⁷ Around this time, neo-Freudianism gained traction in China, while other strands of psychodynamic science took root in India, Japan and Egypt.⁴⁸ Another place for the flourishing of psychoanalysis in the early twentieth century was Britain. A new, corollary phenomenon that coalesced in the interwar era was the collaboration between psychiatry and the social sciences, especially cultural anthropology. This led to the rise of the culture and personality school, which tended to advocate for a more liberal and egalitarian understanding of sexual diversity.⁴⁹ When the sociologically and statistically oriented Kinsey-style sexology emerged in full force in the 1940s and 1950s, serious academic discussions about human sexuality were not new to the American public. Lurking in the background was the going back and forth between Western Europe and the US in the increasingly invasive state policies on reproduction backed by the international eugenics movement.⁵⁰ This 'northern circuit', however, did not assume complete hegemony. In the Japanese and Chinese contexts, the impact of British humanistic sexology, especially the writings of Edward Carpenter and Havelock Ellis, was strong.⁵¹ The translation of their work into East Asian languages undergirded many feminist and utopian visions for society.⁵² If Kinsey's interest in the statistical normality of diverse sexual expression was any

University Press, 2000; Dror Ze'evi, *Producing Desire: Changing Sexual Discourse in the Ottoman Middle East, 1500-1900*, Berkeley: University of California Press, 2006.

46 Eli Zaretsky, *Secrets of the Soul: A Social and Cultural History of Psychoanalysis*, New York: Alfred A. Knopf, 2004; George Makari, *Revolution in Mind: The Creation of Psychoanalysis*, New York: Harper, 2008; John Burnham (ed.), *After Freud Left: A Century of Psychoanalysis in America*, Chicago: The University of Chicago Press, 2012; Elizabeth Lunbeck, *The Americanization of Narcissism*, Cambridge, MA: Harvard University Press, 2014; Dagmar Herzog, *Cold War Freud: Psychoanalysis in an Age of Catastrophe*, Cambridge: Cambridge University Press, 2017.

47 Henry Abelove, *Deep Gossip*, Minneapolis: University of Minnesota Press, 2005; Dagmar Herzog, 'Queering Freud differently: radical psychoanalysis and ethnography in the 1970s-1980s', *Psychoanalysis and History* (2020) 22, pp. 1-14.

48 Christopher Harding, 'Sigmund's Asian fan-club? The Freud franchise and independence of mind in India and Japan', in Robert Clarke (ed.), *Celebrity Colonialism: Fame, Power and Representation in Colonial and Postcolonial Cultures*, Newcastle upon Tyne: Cambridge Scholars Publishing, 2009, pp. 73-87; Omnia El Shakry, *The Arabic Freud: Psychoanalysis and Islam in Modern Egypt*, Princeton, NJ: Princeton University Press, 2017; Howard Chiang, 'The secrets of a loyalist soul: psychoanalysis and homosexuality in wartime China', *GLQ: A Journal of Lesbian and Gay Studies* (2023) 29, pp. 61-76.

49 Joanne Meyerowitz, "'How common culture shapes the separate lives": sexuality, race, and mid-twentieth-century social constructionist thought', *Journal of American History* (2010) 96, pp. 1057-84; Peter Mandler, *Return from the Natives: How Margaret Mead Won the Second World War and Lost the Cold War*, New Haven, CT: Yale University Press, 2013.

50 Daniel Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity*, New York: Alfred A. Knopf, 1985.

51 On humanistic sexology see Heike Bauer, *English Literary Sexology: Translations of Inversion, 1860-1930*, Basingstoke: Palgrave Macmillan, 2009.

52 Rachel Hui-Chi Hsu, 'The "Ellis effect": translating sexual science in Republican China, 1911-1949', in Fuechtner, Haynes and Jones, op. cit. (6), pp. 186-210; Michiko Suzuki, 'The science of sexual difference: Ogura Seizaburō, Hiratsuka Raichō, and the intersection of sexology and feminism in early twentieth-century Japan', in Fuechtner, Haynes and Jones, op. cit. (6), pp. 258-78.

indication at all, the sex research of Takahashi Tetsu in the 1950s can be considered its descendant only in part.⁵³ It is possible to link Takahashi's work back to the new mode of research priority given to non-heterosexual variation that anthropologist Edward Westermarck (1862–1939) began to catalogue in the early twentieth century.⁵⁴

Toward the end of the twentieth century, historians came to be embroiled in a heated debate over the nature and epistemology of sexuality, namely the biological-essentialism-versus-social-constructionism debate.⁵⁵ The big picture of sexual science can be held accountable for giving rise to this debate, because its history lends credence to both positions. On the one hand, empirical evidence gathered by social scientists, including cultural anthropologists Ruth Benedict (1887–1948) and Margaret Mead (1901–78) and clinical psychologist Evelyn Hooker (1907–96), increasingly challenged the normative template of Western sexual culture.⁵⁶ Their work downplayed biology and stressed the culturally sanctioned logic of categorization in sexual pathology, including homosexuality. In part due to Hooker's work, for instance, the American Psychiatric Association decided to depathologize homosexuality in 1973, suggesting that any understanding of sexual orientation must be intrinsically mediated by social norms.⁵⁷ Twenty-eight years later, Chinese psychiatrists updated their classification and diagnostic criteria by following this trend of depathologization.⁵⁸ On the other hand, life scientists accumulated a long list of alleged proof for the biological basis of sexual diversity: whether it is in the hormones, the genes, neuroanatomy, brain organization or evolution's rainbow.⁵⁹ Many of these scientists were quite explicit about the political agenda behind their work: if gender/sexual orientation can be shown to be biologically immutable, then the rights of gender and sexual minorities should be protected by law. The essentialism-versus-constructionism debate remains far from settled, and for good reasons. But if there is one outstanding feature in this big picture of sexual science, it is

53 Takahashi, op. cit. (13).

54 Leck, op. cit. (43).

55 John Boswell, 'Revolutions, universals and sexual categories', *Salmagundi* (1982–3) 58–9, pp. 89–113; Carole Vance, 'Social construction theory: problems in the history of sexuality', in Peter M. Nardi and Beth E. Schneider (eds.), *Social Perspectives in Lesbian and Gay Studies: A Reader*, New York: Routledge, 1998, pp. 160–70; David Halperin, *How to Do the History of Homosexuality*, Chicago: The University of Chicago Press, 2002.

56 Evelyn Hooker, 'The adjustment of the male overt homosexual', *Journal of Projective Techniques* (1957) 21, pp. 18–31; Hooker, 'Male homosexuality in Rorschach', *Journal of Projective Techniques* (1958) 22, pp. 33–54; Lois Banner, *Intertwined Lives: Margaret Mead, Ruth Benedict, and Their Circle*, New York: Alfred A. Knopf, 2003.

57 Ronald Bayer, *Homosexuality and American Psychiatry: The Politics of Diagnosis*, New York: Basic Books, 1981; Jack Drescher and Joseph P. Merlino (eds.), *American Psychiatry and Homosexuality: An Oral History*, New York: Routledge, 2007; Howard Chiang, 'Effecting science, affecting medicine: homosexuality, the Kinsey reports, and the contested boundaries of psychopathology in the United States, 1948–1965', *Journal of the History of the Behavioral Sciences* (2008) 44, pp. 300–18.

58 Wenqing Kang, 'The decriminalization and depathologization of homosexuality in China', in Timothy B. Weston and Lionel M. Jensen (eds.), *China in and beyond the Headlines*, Lanham, MD: Rowan & Littlefield, 2012, pp. 231–48. Even so, the popularity of reparative or 'aversion' therapy has lingered in contemporary China: see Hongwei Bao, 'On not to be gay: aversion therapy and transformation of the self in postsocialist China', *Health, Culture and Society* (2012) 3, pp. 133–49.

59 Simon LeVay and Dean H. Hamer, 'Evidence for a biological influence in male homosexuality', *Scientific American* (1994) 270, pp. 44–9. Scholars have criticized their studies: see William Byne, 'The biological evidence challenged', *Scientific American* (1994) 270, pp. 50–5; Garland E. Allen, 'The double-edged sword of genetic determinism: social and political agendas in genetic studies of homosexuality, 1940–1994', in Vernon A. Rosario (ed.), *Science and Homosexualities*, New York: Routledge, 1997, pp. 242–70; Jennifer Terry, 'The seductive power of science in the making of deviant subjectivity', in Rosario, op. cit., pp. 271–95. On the history of brain organization theory see Rebecca Jordan-Young, *Brain Storm: The Flaws in the Science of Sex Differences*, Cambridge, MA: Harvard University Press, 2010. On evolution see Joan Roughgarden, *Evolution's Rainbow: Diversity, Gender, and Sexuality in Nature and People*, Berkeley: University of California Press, 2004.

the growing diversity in the representation of scientists within the profession: women, queer and trans researchers are now taken more seriously than ever as important interlocutors in science. In mental-health research, the goal of science shifted from finding a treatment for sexual variation to helping individuals address socially induced cognitive behavioural problems due to gender or sexual expression and promoting their well-being.⁶⁰

While cultural translation, circulation and exchange have been the main mechanisms for the global dissemination of sexual science, *innovation* suggests a promising framework for bringing together and recognizing the importance of non-Western actors in the big picture of sexology.⁶¹ By innovation, I am referring to the formulation of novel scientific concepts, approaches and practices by researchers irreducible to a bare imitation of something pre-existing. Though already treated by some scholars as central to translation projects, innovation, it seems to me, provides a refreshing lens for understanding the politics of knowledge in cross-cultural contexts.⁶² For example, Pende's biotypology, hormonal experiments in Soviet Russia, the temporally inflected Hindu sexology, the elite and popular ways of crafting sexual selfhood in Western India, the international communist sexology of Agnes Smedley (1892–1950), the use of sex change surgery to treat homosexuality in 1950s Mexico (e.g. Marta Olmos) or in contemporary Iran, just to name a few, all exceeded the mechanisms of mere appropriation and circulation.⁶³ This may simply be a matter of emphasis in the degree and direction of novelty, but if we begin to treat these experimentations in sexual knowledge production as genuinely innovative in their own right, we might come closer to a workable definition of scientific innovation – one that recognizes the limits of 'discovery', 'newness' and 'revolution' as always already circumscribed by political contexts and still demands close attention to local and regional social factors in order to grasp the findings they generate. Similarly, this holds promise in developing a more robust comparative approach to the Foucault-inspired history of *scientia sexualis*. Hirschfeld could not have fully articulated his theory of transvestism without considering cross-cultural data, notably cross-dressing in the Japanese *onnagata* theatre culture.⁶⁴ What is often taken to be strictly an invention of Western science turns out to be anything but: the concept of transvestism assumes salience only by flattening the meaning of cultural others through its own presumed universality. As an analytic, innovation works best if it enables us to trace back to such an origin story to sharpen the blind spot of scientific discovery.⁶⁵

Above all, one of the major innovations to which recent histories of global sexology have added empirical weight concerns the existence of an alternative 'Latin circuit' of

60 Letitia Anne Peplau, 'Research on homosexual couples: an overview', *Journal of Homosexuality* (1982) 8, pp. 3–8.

61 On the rhetoric of innovation in the history of science see Benoît Godin, *Models of Innovation: The History of an Idea*, Cambridge, MA: MIT Press, 2017.

62 Heike Bauer (ed.), *Sexology and Translation: Cultural and Scientific Encounters across the Modern World*, Philadelphia: Temple University Press, 2015.

63 Dan Healey, *Homosexual Desire in Revolutionary Russia: The Regulation of Sexual and Gender Dissent*, Chicago: The University of Chicago Press, 2001; Afsaneh Najmabadi, *Professing Selves: Transsexuality and Same-Sex Desire in Contemporary Iran*, Durham, NC: Duke University Press, 2014; Ahluwalia, op. cit. (26); Chiara Beccalossi, 'Latin eugenics and sexual knowledge in Italy, Spain, and Argentina: international networks across the Atlantic', in Fuechtner, Haynes and Jones, op. cit. (6), pp. 305–29; Botre and Haynes, op. cit. (26); Veronika Fuechtner, 'Agnes Smedley between Berlin, Bombay, and Beijing: sexology, communism, and national independence', in Fuechtner, Haynes and Jones, op. cit. (6), pp. 398–421; Ryan M. Jones, 'Mexican sexology and male homosexuality: genealogies and global contexts, 1860–1957', in Fuechtner, Haynes and Jones, op. cit. (6), pp. 232–57.

64 Rainer Hernn and Michael Thomas Taylor, 'Magnus Hirschfeld's interpretation of the Japanese *onnagata* as transvestites', *Journal of the History of Sexuality* (2018) 27, pp. 63–100.

65 Rainer Hernn, 'Magnus Hirschfeld's *onnagata*', in Fuechtner, Haynes and Jones, op. cit. (6), pp. 374–97.

eugenics.⁶⁶ Attached to its explicitly social-engineering orientation, the Latin circuit of sexology stressed research on endocrinology, intersexuality and the correction of sexual development through hormone administration and manipulation.⁶⁷ Was the Latin circuit exceptional? It certainly differed from the northern circuit in many ways: the enduring legacy of neo-Lamarckism (whereas the northern circuit rode on the Mendel–Weismann model of hard inheritance), developmental crisis and other regional factors in Latin America, the role of Catholicism, and different configurations of migration and race mixing. Thus, in this sense, the Latin circuit diversified the international meaning and implementation of eugenics precisely due to regional contextual factors. On the other hand, there are resemblances between the emphasis on glandular science in the Latin circuit and the notable popularity of endocrinological sexology in Eastern and Central Europe.⁶⁸ Though a variant of Hirschfeld’s institute or the New York-based Committee for the Study of Sex Variants did not exist in the Soviet Union, the first public sexological institute in the world was founded in Prague in 1921.⁶⁹ To this list we can easily add Pende’s Institute of Biotypology, which was founded in 1926 in Genoa and moved to Rome in 1935. According to one estimate, the Rome institute anticipated examining 190 individuals per day (seven days a week).⁷⁰ Again, the analytic of innovation both extends and challenges existing elements in the big picture of sexual science.

Last but not least, the overall picture I have taken from the recent interest in interregional synergy and connectivity is an account of global history that is co-constitutive in nature.⁷¹ In many ways, my critique of mobility, appropriation and circulation also applies to what I just said about innovation. That is, the unidirectional trajectory of all these processes might be undermined by the facts from the past with which we have been confronted: this global history of sexual science is made possible by the mutual production of knowledge. Hirschfeld’s theory of gender variance is a phenomenon at once local and global in scope in both Germany and Japan; so is the biotypological eugenics transcending the borders of Latin America and Iberian Europe. In what ways this co-constituted world has evolved in the Cold War era, alongside the rise of neo-liberalism and during the age of global infrastructural development centred on Asia is now an open question.⁷²

66 Nancy Leys Stepan, *The Hour of Eugenics: Race, Gender, and Nation in Latin America*, Ithaca, NY: Cornell University Press, 1991.

67 Chiara Beccalossi, ‘Types, norms and normalization: hormone research and treatments in Italy, Argentina and Brazil, c.1900–1950’, *History of the Human Sciences* (2021) 34, pp. 113–37.

68 Igor S. Kon, *The Sexual Revolution in Russia*, New York: Free Press, 1995; Dan Healey, *Homosexual Desire in Revolutionary Russia: The Regulation of Sexual and Gender Dissent*, Chicago: The University of Chicago Press, 2001; Richard Cleminson and Francisco Vázquez García, *Hermaphroditism, Medical Science and Sexual Identity in Spain, 1850–1960*, Cardiff: University of Wales Press, 2009; Lišková, op. cit. (28); Agnieszka Kościańska, *Gender, Pleasure, and Violence: The Construction of Expert Knowledge of Sexuality in Poland*, Bloomington: Indiana University Press, 2021.

69 On the Committee for the Study of Sex Variants see George Henry, *Sex Variants: A Study of Homosexual Patterns*, New York: Paul B. Hoeber, 1941.

70 Chiara Beccalossi, ‘Italian sexology, Nicola Pende’s biotypology and hormone treatments in the 1920s’, *Histoire, médecine et santé* (2017) 12, pp. 73–97. On the patients of the Rome institute see also Chiara Beccalossi, ‘Optimizing and normalizing the population through hormone therapies in Italian science, c.1926–1950’, *BJHS* (2020) 53, pp. 67–88.

71 Edward Ross Dickinson, ‘Complexity, contingency, and coherence in the history of sexuality in modern Germany: some theoretical and interpretive reflections’, *Central European History* (2016) 49, pp. 93–116; Edward Ross Dickinson, *The World in the Long Twentieth Century: An Interpretive History*, Berkeley: University of California Press, 2018.

72 For recent studies that explore the ‘afterlife’ of sexology and the ‘present-tense sexual science’ see Joan Lubin and Jeannie Vacarro (eds.), ‘Sexology and its afterlives’, *Social Text* (2021) 39, pp. 1–101; Benjamin Kahan and Greta LaFleur (eds.), *GLQ: A Journal of Lesbian and Gay Studies* (2023) 29, *The Science of Sex Itself*. Some have argued that a potent ramification of eugenics in the recent history of East Asia was the one-child policy implemented in reform-era China. See, for example, Dikötter, *Imperfect Conceptions*, op. cit. (22); Susan Greenhalgh, *Just*

But it is a question unanswerable without the groundwork laid by the recent turn to regional diversity and knowledge diffusion in the big picture of sexual science.

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One Child: Science and Policy in Deng's China, Berkeley: University of California Press, 2008; Sarah Mellors Rodriguez, *Reproductive Realities in Modern China: Birth Control and Abortion, 1911-2021*, Cambridge: Cambridge University Press, 2023.

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