# A Global History of Sexual Science, 1880–1960

Edited by Veronika Fuechtner, Douglas E. Haynes, and Ryan M. Jones

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### "Forms So Attenuated That They Merge into Normality Itself"

ALEXANDER LIPSCHÜTZ, GREGORIO MARAÑÓN, AND THEORIES OF INTERSEXUALITY IN CHILE, CIRCA 1930

Kurt MacMillan

On June 1, 1929, a twenty-two-year-old woman visited San Agustín Hospital in Valparaíso, Chile, for a medical consultation. According to the attending physicians, the young woman wanted to marry her boyfriend and enter motherhood but felt worried about such prospects because she had never menstruated. Several doctors examined her body and concluded that she had an "absolutely feminine" constitution based on the development of her hips, breasts, body hair, maternal instincts, and sexual interest in her boyfriend.1 Several anatomical features, however, gave them pause. The young woman appeared to lack a cervix, since her vagina ended in a cul-de-sac three centimeters in depth. A tactile inspection of her abdomen suggested that she might also lack a uterus, ovaries, and Fallopian tubes. The doctors observed swelling in her labia majora that appeared to be caused by the presence of two ovoid organs and recommended a laparotomy to clarify her diagnosis. According to the doctors' reports, she agreed to the operation and was allegedly willing to undergo any surgical procedure that might enhance her ability to have children. Conducted the following month, the laparotomy did not reveal a uterus, ovaries, or Fallopian tubes. An incision in her labia majora, however, did uncover what appeared to be a pair of testes, a resemblance later confirmed in a biopsy report. Upon learning the results of the surgery, the doctors claimed that the young woman felt "true repugnance toward the masculine glands she possessed and asked insistently that they be removed." As the doctors debated the merits of further surgical intervention in the case of the young woman, whom they referred to as O.B.B., one observer advocated the removal of her gonads, arguing that "day by day [they] steal some of her femininity, dragging her toward a growing chaos."3

Gregorio Marañón's analysis of "intersexual conditions" provided the physicians in Valparaíso with their clinical framework for diagnosing and treating the O.B.B. case. Marañón was a renowned twentieth-century Spanish doctor and intellectual based in Madrid whose prodigious writings on sexual science had a global impact in Europe and the Americas. His clinical studies in endocrinology and his outspoken support for sex reform established him as an international scientific authority with pronounced influence in Latin America. Intersexuality was a foundational concept in his sex research, which he defined as a state "in which physical or functional marks of the two sexes coincide in a single individual—whether it be a man or woman—either intermingled in equivalent or almost equivalent proportions or, as is much more common, with the legitimate sex unquestionably predominant over the spurious." 5

For Marañón, intersexuality described sexually ambiguous individuals who displayed "spurious" features of the opposite sex that transgressed an assumed binary norm. Based on this definition, Marañón specified the normal and abnormal "marks" of sex, generating comprehensive clinical taxonomies of sexual characteristics to differentiate men and women. He also identified over a dozen "intersexual conditions" ranging from hermaphroditism to sexually "inverted" behaviors. He grounded these typologies in the endocrine system, arguing that hormonal influences tied to chronological development patterns were the basis of sexual differentiation and the emergence of intersexual conditions. For the doctors at San Agustín Hospital, determining O.B.B.'s "true sex" was part of a larger project to document Marañón's intersexual types among their patients. By circulating such knowledge to Chile's scientific and medical communities, they aimed at reforming national laws on sex determination, marriage, and homosexuality on the basis of sexual science.

Marañón's development of his theory of intersexuality and its appropriation in Valparaíso had been facilitated by the Latvian-Chilean physiologist Alexander Lipschütz, a foundational figure in sexual physiology who would eventually become directly involved in the analysis of the O.B.B. case. Lipschütz emigrated from Europe to Latin America in the mid-1920s, where he served as a faculty member at the University of Concepción in southern Chile from 1926 to 1936. Prior to immigrating to Chile, Lipschütz had built a distinguished career in the study of sexual physiology at universities and



14.1. Gregorio Marañón, circa 1930.

institutes across central Europe, including collaborations with leading figures in sexual science such as Eugen Steinach and Magnus Hirschfeld. As director of the University of Concepción's Institute of Physiology, Lipschütz pursued experimental laboratory research on the endocrinology of sex while incorporating Concepción's scientific community into larger transnational networks. Lipschütz's leadership combined with the institutional support of the university established Chile as a global producer of sexual science. Indeed, Marañón drew closely on Lipschütz's work in formulating his concept of intersexuality and took note of the O.B.B. case to legitimate his work. Lipschütz also intervened in the O.B.B. case to resolve her identity as an "intersexual type" based on Marañón's criteria. Consequently, Marañón's theory of intersexuality and the O.B.B. episode were mutually constitutive based on their connection to Lipschütz, who was embedded in transnational, multidirectional networks of sexual science that cut across Chile, Spain, and central Europe.

This chapter distinguishes the O.B.B. case as an illuminating episode in the global history of sexual science that reveals Chile's participation in multiple and overlapping transnational knowledge networks during the first half



14.2. Alexander Lipschütz and his niece Marina Geringas, in Rīga, Latvia, 1962.

of the twentieth century. Lipschütz's installation at the University of Concepción connected Chile to a specific central European network grounded in Vienna and Berlin that centered on Steinach's work in sexual physiology and included Hirschfeld and Lipschütz. This network also provided the main scientific and political frameworks for Marañón's theory of intersexuality. At the same time, Marañón incorporated Lipschütz into a Hispanic network of sexual science through the formulation of his theory of intersexuality. He cultivated his work in conjunction with transnational exchanges based on hispanismo, an ideology that posited ongoing cultural relations between Spain and its former colonies in Latin America, and recent efforts by Spanish intellectuals to remake Spain as a beacon of Western science. Marañón's pursuit of intersexuality created a Hispanic network of sexual science that led from Madrid to Havana and Concepción: the first major presentation of his theory occurred in Cuba in 1927 under the banner of hispanismo, and he engaged in a series of scientific exchanges with Lipschütz during the same period.8 Although the reception of Marañón's work eventually spread across a wider Latin circuit in the 1930s—including Italy, France, Argentina, Brazil, and Mexico—the emergence of his theory occurred in this smaller, Hispanic circuit. In the process, he aided  $Lipsch\ddot{u}_{tz}$  in reaching a larger Spanish-speaking audience outside of Chile.

While the global underpinnings of the O.B.B. case are the primary focus of this chapter, local and national conditions in Chile undoubtedly shaped the event as well. The O.B.B. case occurred during the military dictatorship of Carlos Ibáñez del Campo, whose administration promoted public health and social reform, which included debates about sex reform and sex education. The doctors at San Agustín Hospital, for example, used Marañón's theory of intersexuality to substantiate national sex reform while asserting Chile's place in the global scientific community. In regard to the O.B.B. case, the doctors perceived her as a rare specimen of global scientific interest—an intersexual type to be catalogued in the Chilean national body, and also a local woman needing swift medical attention to preserve her gender identity. The adaptation of Marañón's theory of intersexuality in Valparaíso was a local instantiation of national sex reform on the basis of global developments in sexual science.

The first section of this chapter examines Lipschütz's emergence as a global figure in sexual science based on a central European network. The second part investigates the scientific exchanges and Hispanic network building of Lipschütz and Marañón that shaped the theory of intersexuality while legitimizing its adaptation in Chile. The final section engages in a close reading of the O.B.B. case as a local event circumscribed by global sexual science. By pursuing these threads of analysis, this chapter demonstrates how multiple transnational networks of sexual science became interwoven in Chile and the O.B.B. case.

#### LIPSCHÜTZ'S CENTRAL EUROPEAN NETWORK

The global foundations of the O.B.B. case begin with the emergence of Lipschütz as a distinguished physiologist in central Europe and his subsequent migration to Chile. Born to a German-Jewish family in the Baltic port city of Riga in 1883, Lipschütz studied physiology at Georg-August-Universität Göttingen with Max Verworn, a disciple of recapitulation theorist Ernst Haeckel. After completing his degree at Göttingen in 1907, Lipschütz held assistantships at universities in Germany and Switzerland for nearly a decade. The pivotal break in his early career occurred from October 1916 to March 1917 when he studied sexual physiology with Eugen Steinach

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at the Institute for Experimental Biology in Vienna. During this critical interlude, Lipschütz received training in Steinach's research methods while being incorporated into his scientific networks.

As a foundational figure in the development of endocrinology as a global sexual science during the early twentieth century, Steinach produced bold theories about sex, gender, and sexuality grounded in glandular-transplantarion experiments conducted on small mammals and humans. Based on his laboratory work with guinea pigs, Steinach theorized that the hormonal secretions of testes "masculinized" physique and character while the hormonal secretions of ovaries caused "feminization." He also characterized the relationship between the internal secretions of testes and ovaries as being fundamentally antagonistic since they appeared to inhibit the influence of one another when implanted into the same body. 11 In Steinach's view, if gonadal secretions were responsible for generating dualistic sexes and every individual had a "primordial anlage or potentiality for either sex," then sex changes were possible through castration and transplantation operations. 12 Building on his theories of sexual physiology, Steinach earned fame and notoriety for his clinical therapies, which included an attempt to cure male homosexuality through testicular transplants and the experimentation with vasectomy as a remedy for senescence. 13 Steinach's research garnered substantial interest from Hirschfeld, who believed that they might hold the key for naturalizing and destigmatizing homosexuality on biological grounds. 14 Hirschfeld visited Steinach's laboratory on the eve of World War I, and they subsequently exchanged knowledge between Berlin and Vienna for many years based on their mutual interest in establishing an authoritative, biological account of homosexuality.<sup>15</sup> Together they formed a central European network of sexual science that provided the setting for Lipschütz's emergence as a physiologist.

During his six months of research in Steinach's laboratory, Lipschütz conducted castration and gonadal-implantation experiments on small mammals to study the interaction of testicular and ovarian secretions. <sup>16</sup> Lipschütz's work with Steinach led him to write a book that would establish his reputation in sexual physiology, *Die Pubertätsdrüse und ihre Wirkungen* (The puberty gland and its functions). Published in 1919 at the University of Bern, Lipschütz's book was a global survey of scientific research conducted in the 1910s about the role of gonads and internal secretions in mammals, birds, amphibians, and insects. His book supplied a comprehensive summary of theories and debates about the role of internal secretions in the development

of sexual differentiation and sexual behavior in humans. In August 1919, shortly after the publication of his book, Lipschütz received a prestigious appointment as director of the Institute of Physiology at the University of Tartu in Estonia.

From his post in the Baltics, Lipschütz used his laboratory research on sexual physiology to substantiate broader inquiries into the science and politics of human sexuality led by Hirschfeld. In 1921, Lipschütz presented a paper titled "The Internal Secretions of the Sex Glands and Their Significance for Human Sexuality" at the First International Conference for Sexual Reform, organized by Hirschfeld at his Institute for Sexual Science in Berlin. Although Lipschütz was not explicit about the sexual politics of his work, his association with Hirschfeld revealed his stake in sexual science as a means of "modernizing" social attitudes toward sex. By participating in the sex-reform conference in Berlin, visiting the Institute for Sexual Science on multiple occasions, and citing Hirschfeld as the leading scientific authority on homosexuality, Lipschütz tacitly supported the destigmatization of homosexuality and the replacement of popular wisdom and religious morality with cutting-edge scientific knowledge about sex. 18

Lipschütz's receptivity to social and psychological explanations of human sexuality made him an important liaison for the reception of sexual physiology in another discipline of sexual science grounded in central Europe: psychoanalysis. For Sándor Ferenczi, a Hungarian psychoanalyst and member of Freud's Vienna Psychoanalytic Society, Lipschütz exercised a favorable sense of caution in relating physiologists' experimental laboratory research to broader understandings of human sexuality. In his review of Die Pubertätsdrüse und ihre Wirkungen, Ferenczi lauded the fact that a "reproach of one-sidedness and tendentiousness cannot be brought against the author of this work" since he "repeatedly declares 'that the psychosexual conduct of man cannot be explained alone from the effects of the internal secretions of the sexual glands." Ferenczi emphasized what he perceived to be the complementarity between Lipschütz's account of the role of gonadal secretions during various stages of human sexual development and Freud's model of infantile sexuality, latency, and puberty. Freud himself added several citations of Die Pubertätsdrüse und ihre Wirkungen in his 1920 revisions to Three Essays on the Theory of Sexuality to mitigate the implications of physiology for psychoanalysis. 20 In response to Steinach's physiological account of samesex desire (and its potential "cure") based on binary, sex-specific, and antagonistic glands and hormones, Freud emphasized the irreducibility of psychological development from an original bisexual disposition to chemical mediation. <sup>21</sup> Like Ferenczi, Freud used Lipschütz's work as an intermediary between physiology and psychoanalysis as rival fields of sexual science tied to Vienna.

Beyond facilitating scientific exchanges between physiologists, sexologists, and psychoanalysts in central Europe, Lipschütz extended the geographical coordinates of the Steinach-Hirschfeld circuit to Latin America through his academic post in Concepción. The expansion of this network to a truly global level, however, was not a one-way dissemination from Europe to Latin America, nor was Lipschütz a proselytizing disciple for his mentors. Instead, Lipschütz grounded physiological research in Concepción in the scientific frameworks prioritized by the central European network from which he had arisen. At the same time, he established new local, national, and transnational connections for circulating the scientific knowledge that he and his colleagues were producing in southern Chile.

#### LIPSCHÜTZ'S CHILEAN MIGRATION

Lipschütz's emergence as a leading authority in sexual physiology led to his recruitment by the University of Concepción in the mid-1920s. The university was established in 1919 as a private research institution primarily devoted to science and industry. Its founders actively recruited European scientists to its faculties in order to build a national and global reputation.<sup>22</sup> As one of the university's major hires, Lipschütz received an offer that included a faculty appointment in the School of Medicine, the inaugural directorship of the Institute of Physiology, a house near campus, and one of the highest salaries at the university.<sup>23</sup> By accepting the position and relocating his family and research laboratory to Concepción, Lipschütz became a strategic hire by the university to promote science and modernization in southern Chile—a longstanding borderland region that had been dominated by the Mapuche as recently as the late nineteenth century. By installing Lipschütz in the School of Medicine and the Institute of Physiology, university officials aimed at placing the University of Concepción on the global scientific map while improving Chilean medical care.24

The broad institutional support for Lipschütz at the University of Concepción strongly contributed to his successful migration to Chile by imbricating his professional development with the expansion of Chilean

science. As director of the Institute of Physiology, Lipschütz trained students in experimental laboratory research while assisting physicians on endocrine-based medical issues. Under his leadership, the institute provided a local and national forum for the production and exchange of physiological knowledge among Chilean scientists and doctors. Lipschütz also cultivated the international influence of the institute and the university by representing them abroad in publications, conferences, and invited lectures, including the Second International Congress for Sex Research, convened in London in 1930.<sup>25</sup>

To consolidate Concepción's local scientific community while globalizing its influence, Lipschütz organized the Biological Society of Concepción in 1927 and served as its first president. <sup>26</sup> The main organ of the society was the Boletín de la Sociedad Biológica de Concepción (Bulletin of the Biological Society of Concepción), an academic journal published several times annually that featured research by Lipschütz and his students. Lipschütz facilitated the global circulation of the Boletín by establishing reciprocal relations with similar organizations, including the Biological Society of Paris, directed by the French physiologist Eugène Gley. <sup>27</sup> Lipschütz also spearheaded honorary memberships for Steinach and the Argentinian physiologist Bernardo Houssay. <sup>28</sup>

As a European transplant to Latin America, Lipschütz positioned himself as a scientifically and politically relevant member of Chilean society. Lipschütz started learning Spanish in advance of his migration, began publishing his work under the name "Alejandro Lipschutz," and imagined himself as supporting the intellectual autonomy and political independence of Chile and Latin America from European domination. In a lecture presented in Santiago and Concepción shortly after his arrival, he remarked that Latin America was freeing itself from the legacies of colonialism and moving to the forefront of medical science.<sup>29</sup> Lipschütz echoed similar ideas in his inaugural speech to the Biological Society of Concepción by framing the society as furthering Latin America's independence from Europe.30 His appeal to nationalist and anti-imperialist sentiment might have obfuscated his own role in expanding ties to European science, but it was also a claim of political solidarity against geopolitical racial subordination. Indeed, racial politics, rather than sexual politics, would become a focal point of Lipschütz's career in Chile, beginning in the late 1930s with the rise of fascism and anti-Semitic violence in Europe. Building on his Zionism and emphasis on Jewish contributions to science and modernity, Lipschütz debunked scientific racism and

aligned himself with *indigenista* movements in Latin America, which aimed at incorporating indigenous cultures into national identity.<sup>31</sup> He also drew parallels to Latvia's status as a colonial possession under German and Russian empires and proposed Soviet models of ethnic autonomy for Latin America.<sup>32</sup>

Cultivating a sense of belonging beyond mere adaptation, Lipschütz actively embedded himself in Chilean society and sought new frontiers of scientific and political thought from within it. His efforts and institutional support distinguish him from Max Marcuse, another sexual scientist who emigrated from central Europe during this period. As Kirsten Leng shows in her essay in this volume, Marcuse remained a marginal figure in Israeli society through the remainder of his life. By contrast, Lipschütz's roots in Chile were deep enough to withstand a contractual dispute with the University of Concepción that ended his appointment ten years after his arrival. He subsequently relocated to Santiago and became the director of the Institute for Experimental Medicine, a government-funded research laboratory created specifically for him, which he maintained until his retirement in the 1960s.

As Lipschütz assimilated to Chilean society, he brought the sexual physiology of the central European network to the University of Concepción, including his theory of intersexuality. Lipschütz defined intersexuality as "an abnormal condition in which more or less rudimentary characters of both sexes are combined in the same individual; somatic, psychical, and generative characters of both sexes may be present simultaneously or successively."33 He hypothesized that such a condition resulted from "intersexuality in hormoneproduction, hormones of both sexes acting simultaneously or successively in the same individual."34 According to Lipschütz, hormones interacted with a plastic, asexual body to generate male, female, and intersexual characteristics; variations in the duration and quantity of hormone production meant that intersexual traits had a vast range. More broadly, his theory supported hormonic intersexuality, in which hormones regulated sexual differentiation during various phases of life—as opposed to zygotic intersexuality, in which sexual differentiation was genetically determined in the zygote.35 While Lipschütz's laboratory research in Concepción focused more exclusively on ovarian function than intersexuality, his model provided an etiology for the clinical studies of intersexuality pursued by Marañón and the medical professionals involved in the O.B.B. case.

Lipschütz's successful migration to Chile in the late 1920s was a crucial precondition for the emergence of the O.B.B. case because it transplanted sex research from the central European network of Steinach, Hirschfeld, and

Lipschütz to Chilean science. The physiological theories, gonadal-transplantation studies, and experimental sex therapies developed in this network, which now included Chile, provided the scientific scaffolding for the doctors at San Agustín Hospital to pursue local clinical research on intersexual conditions. At the same time, Lipschütz's migration positioned Chile on the global map of sexual science in the late 1920s and early 1930s. Indeed, Marañón built connections to Chilean science during this period through his ties to Lipschütz.

#### MARAÑÓN'S SCIENTIFIC EXCHANGES WITH LIPSCHÜTZ

As Lipschütz adjusted to the University of Concepción, Marañón emerged as a leading clinical researcher on human sexual development and an ardent sex reformer in Spain. Born in Madrid in 1887 to a distinguished uppermiddle-class family, Marañón studied medicine at the Colegio de San Carlos in Madrid. He earned his degree in 1911 for a thesis on thyroid physiology and subsequently began working for the General Hospital of Madrid, where he became the preeminent Spanish authority on endocrinology during the first half of the twentieth century. Along with the philosopher José Ortega y Gasset and writers such as Ramón Gómez de la Serna, Marañón was a member of the Generation of '14, a constellation of intellectuals who believed that "Europeanization" held the key to Spanish national regeneration. In contrast to the pessimism of the Generation of '98 that followed the Spanish-American War, the Generation of '14 sought to modernize Spain by importing scientific and political ideas from western Europe.<sup>36</sup> As a member of this cohort, Marañón pursued clinical research in endocrinology to lift the veil of Catholic shame on Spanish sexual life through science while advocating for legal equality between the sexes.<sup>37</sup> At the same time, his vision for reforming gender roles maintained separate spheres in which maternity defined the primary role of women while men served as family breadwinners.<sup>38</sup> Marañón's research coincided with the coalescence of a sex-reform movement in Spain during the dictatorship of Miguel Primo de Rivera from 1923 to 1930. As a politically diverse coalition of doctors, lawyers, feminists, and social activists, Spanish sex reformers of the 1920s sought to liberate sexual attitudes from Catholic morality through the legalization of divorce and the promotion of birth control, sex education, and social hygiene.<sup>39</sup> The Spanish sex-reform movement did not make substantial progress until the emergence of the

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Second Republic in 1931. When Marañón and other liberal intellectuals gained seats in the republic's Constituent Court, they promulgated a new constitution that included a divorce statute. In 1932, Marañón became the first president of the newly established Spanish chapter of Hirschfeld's World League for Sexual Reform.

As a sex reformer and sexual scientist focused on the renewal of Spanish politics and culture, Marañón associated the global circulation of his work with this goal. Marañón used hispanismo to cultivate a Spanish-American audience for his scholarship and establish a Hispanic network of sexual science. Hispanismo was an elite ideology that portrayed Spain and Spanish America as sharing indelible cultural ties despite the severance of formal colonial relations.<sup>40</sup> Initially formulated in the 1820s as a response to the Latin American wars of independence, hispanismo underwent a post-1898 revival as Spanish and Spanish-American elites claimed "spiritual" ties of language, religion, and historical experience to counter the rise of U.S. imperialism and Pan-Americanism in Latin America. 41 Marañón underlined sexual science and sex reform as another source of connection across the hispanista world. His first formal presentation of his theory of intersexuality occurred in Havana, Cuba, in 1927 at the Society for Hispano-Cuban Culture—an organization devoted to building national ties to peninsular Spanish culture. Shortly thereafter, Marañón dedicated his quintessential work, La evolución de la sexualidad y los estados intersexuales (The evolution of sex and intersexual conditions), to the society and to his Cuban friends. He also wrote a preface on intersexuality for El ángel de Sodoma (The angel of Sodom), a novel about male homosexuality published by the Spanish-Cuban author Alfonso Hernández Catá in 1928. By using hispanismo to circulate sexual science between Spain and Latin America, Marañón simultaneously incorporated sexual science into the corpus of hispanismo, tying both to Spain's national regeneration.

Lipschütz became a key figure in the Hispanic network of sexual science pursued by Marañón. His migration afforded Marañón the opportunity to build contacts in Chile while providing Lipschütz with an opportunity to circulate his work across Spain and Latin America. In 1928, Marañón's publisher, the Madrid-based editor Javier Morata, released a Spanish translation of the second edition of *Die Pubertätsdrüse und ihre Wirkungen*, which Lipschütz had rewritten in English in 1924 under a new title, *The Internal Secretions of the Sex Glands: The Problem of the "Puberty Gland."* The Spanish edition included a prologue by Marañón entitled "Breve ensayo sobre la

intersexualidad en la clínica" (Brief essay on clinical intersexuality). Marañón and Lipschütz also conducted formal scientific exchanges in Chile and Spain. The June 1929 issue of the *Revista Médica de Chile* (Medical journal of Chile) featured back-to-back articles by Lipschütz on intersexuality in guinea pigs (which he dedicated to Marañón) and by Marañón on homosexuality as an intersexual condition. <sup>42</sup> In 1930, Lipschütz gave a lecture on ovarian physiology at the Royal Academy of Medicine in Madrid at Marañón's invitation. <sup>43</sup> Through translated publications, journal articles, and travel, Marañón and Lipschütz contributed to the formation of a Hispanic network of sexual science.

Beyond facilitating the circulation of each other's ideas, Marañón selectively drew on Lipschütz's work in sexual physiology to formulate his clinical theory of intersexuality. He affirmed Lipschütz's account of hormonic intersexuality in which gonadal secretions acted upon an asexual soma to produce a spectrum of sexually differentiated bodies.<sup>44</sup> Nevertheless, he associated intersexuality with divergence from masculine and feminine bodies and behaviors, even if they were only imaginary ideals. From the standpoint of his theory, "the 'male-type' and the 'female-type' are almost fantastic figures ... on the contrary, conditions of sexual confusion—in a scale of infinite gradations which extends from flagrant hermaphroditism to forms so attenuated that they merge into normality itself—are so widely diffused that there is scarcely any human being whose sex is not tainted by a doubt, or at least the shadow of a doubt."45 While Lipschütz contended that no two intersexuals were ever exactly alike based on hormonal variables, Marañón maintained the possibility of classifying "intersexual types" into discrete categories ranging from the conspicuous to the imperceptible. Building on Lipschütz's physiological account of sexual differentiation, Marañón framed intersexuality as a clinical tool for recognizing supposedly "deviant" bodies.

As a scientific theory and clinical practice, Marañón's concept of intersexuality was fundamentally biopolitical since it aimed at classifying and disciplining the sex of individual bodies as a form of population management. By positing that the sex of ostensibly "normal" bodies always contained a "shadow of a doubt," its applicability seemed universal. At the same time, it consolidated marginalized bodies and sexualities into scientifically legible types while prescribing measures to correct and prevent them. Marañón claimed, for example, that 60 percent of pubescent boys showed "symptoms" of femininity. 46 Marañón called upon parents and teachers to carefully monitor the sexual conduct and morphology of pubescent boys, since negative

environmental influences, such as seduction by schoolmates or boarders, excessive maternal care, narcissism, masturbation, and fear or timidity toward the opposite sex, could lead to homosexuality—an intersexual condition with both congenital and acquired dimensions. <sup>47</sup> His recommendations included sex education and the encouragement of abstinence among adolescents. <sup>48</sup> Parents, as a result, had to overcome their own inhibitions about discussing sexual matters with their children and adopt a modern, scientific attitude toward childrearing. <sup>49</sup> Intersexuality provided a rubric for establishing order in the midst of "sexual confusion" while framing parents and doctors as agents of surveillance and discipline to ensure the dimorphic, heterosexual ideal.

The formulation of Marañón's theory of intersexuality and its reception in Chile depended upon Marañón's development of a Hispanic network of sexual science that included Lipschütz. His efforts to revive the cultural ties of an imagined Hispanic community provided the foundation for their intellectual exchanges. Such relationships are a striking contrast to Orientalist imaginaries of a distanced, non-European "Other" that Howard Chiang has argued were foundational to European sexology.<sup>50</sup> The global dynamics of sexual science were not exclusively animated by notions of alterity but instead included ideas of propinquity and shared identity. Hispanismo, as a geopolitical doctrine of cultural affinity, imbricated central European and Hispanic networks of sexual science that underwrote the O.B.B. case as a local, national, and global event. The development of Marañón's theory of intersexuality depended upon Lipschütz's ties to the central European network of Steinach and Hirschfeld. At the same time, the reception of his theory in Chile depended upon Lipschütz's status as a Chilean scientist tied to an emerging Hispanic network of sexual science.

#### CLINICAL INTERSEXUALITY IN VALPARAISO

The transnational scientific exchanges between Lipschütz and Marañón that positioned Concepción at the crossroads of knowledge networks from Vienna, Berlin, and Madrid generated wide-ranging engagements with intersexuality in Chile, including the O.B.B. case. Chilean scientists and social reformers, for example, drew on Marañón's theory to promote sex education as a state-building project and to conduct criminological research on homosexuality. His work also evoked skepticism from nationalist writers such as

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Joaquín Edwards Bello, who chided Marañón's "very Spanish erotic obsession" as being distinct from Chilean sexual mores. The closest exegesis of intersexuality, however, occurred in the clinic. The O.B.B. case initially appeared in Oscar Hiriart Corvalan's doctoral thesis, "De los estados intersexuales" (On intersexual conditions), which he completed at the University of Chile's School of Medicine in 1930. He studied hermaphroditism with Dr. Emilio Croizet, director of the Institute of Pathological Anatomy at the University of Chile, and developed his thesis while interning in Valparaíso in 1929. Working under the guidance of Dr. Romeo Cádiz Oyarzún, a surgeon and gynecologist, Hiriart attempted to identify cases of intersexuality at San Agustín Hospital and the Gynecology Clinic of the Worker's Compensation Office.

Hiriart's medical training coincided with social reforms implemented under the military dictatorship of Carlos Ibáñez del Campo (1927–31) that included administrative discussions of sex education. In response to perennial national concerns over high infant-mortality rates, alcoholism, prostitution, venereal disease, and women's labor associated with Chile's nitrate-fueled urbanization and industrialization in the early twentieth century, Ibáñez pursued a campaign of national regeneration. He promoted centralized, state-controlled health services to address the hygiene of working-class mothers and their children, including the creation of the Department of Sanitary Education and the National School of Sanitary Nurses to assist maternity wards and inspect homes.<sup>53</sup> In response to medical concerns about venereal disease, prostitution, and alcoholism as contributors to high infant-mortality rates, Ibáñez's health administrators debated the merits of state-led sex-education programs, which included discussions of intersexual conditions as the result of social ailments.<sup>54</sup>

In January 1930, the University of Concepción hosted the First Chilean Pathology Conference, which served as a gathering of scientists and doctors from around the country to discuss public health and preventative medicine. The honorary, in absentia presidents of the conference were Carlos Ibáñez del Campo and Gregorio Marañón. The conference president, Emilio Aldunate Bascuñán, described the meeting as a means of developing national medicine and interregional exchanges of knowledge through the discussion of local problems and global medical theories. The conference proceedings centered on social hygiene and bacteriology as means of "defending the race" against "social diseases" such as syphilis, tuberculosis, alcoholism, and malnutrition. There were also numerous panels on female sexual

anatomy, including a presentation by Lipschütz on ovarian injections and a discussion of intersexual conditions by a certain "Cádiz O.," which likely included the O.B.B. case. <sup>59</sup> The conference concluded with calls for a Latin American congress on health and disease, a national archive of medicine, and further studies of Chile's medical geography. <sup>60</sup>

Building on the reformist spirit of the times, Hiriart argued in his thesis that his research in Valparaíso would improve national understandings of sex since "educators, statesmen, and judges" often misinterpreted or even ignored matters of sex due to ignorance and prejudice. Consequently, Hiriart promoted the inclusion of "sex unknown" or "doubtful sex" as options for recording the sex of an infant with the Office of Civil Registry. Such a reform would account for intersexual conditions and acknowledge that sexual differentiation was not complete at birth—in accordance with Marañón's hormonic theory of intersexuality. Hiriart also advocated the repeal of Penal Code 365, an 1874 statute outlawing sodomy in Chile that ran counter to the wave of decriminalization laws passed across Latin America in the nineteenth century, including Argentina, Brazil, and Mexico. By taking up the issue of intersexuality as a means of reforming sex in Chile, Hiriart directly engaged the Hispanic network of sexual science tied to Marañón and Lipschütz.

O.B.B. became the centerpiece of Hiriart's study of intersexual conditions in Valparaíso because she appeared to be a rare case of hermaphroditism based on her bodily constitution. According to Marañón's theory of intersexuality, hermaphroditism developed from "ovo-testes": intersexual gonads in which ovarian and testicular tissues coexisted. Marañón also noted the great difficulty of confirming the existence of an ovo-teste, particularly in a living patient, since a thorough analysis of the gonads required their extirpation. Confirming O.B.B. as a hermaphrodite would render her case highly significant in the Hispanic and central European networks framing Hiriart's research.

Nevertheless, diagnosing O.B.B. as a hermaphrodite seemed tenuous to Hiriart and his colleagues since the biopsy report confirmed the presence of testes rather than ovo-testes. The fact that she possessed many "feminine" attributes in body and character, however, led them to speculate about her apparent lack of ovarian tissue. Hiriart offered three hypotheses to reconcile the conflicting physiological and clinical evidence: (1) O.B.B. had undiscovered ovarian tissue somewhere in her body; (2) O.B.B. did possess ovo-testes but the biopsy sample had not included the ovarian tissue; (3) O.B.B.'s testes

were originally ovo-testes that had only recently transformed to their current state with the loss of the "weaker tissue." While conceding the implausibility of the first two solutions, he defended the third hypothesis, believing that it would be confirmed if O.B.B. became more "virile."

While O.B.B.'s place in Marañón's taxonomy of intersexual types seemed unclear, she had already become part of a therapeutic experiment that resembled the work of Steinach. Unbeknownst to O.B.B., the doctors had implanted two pieces of an ovary into her abdomen during the laparotomy, which had been extirpated from another patient thirty minutes beforehand. Hiriart did not explain the purpose of this covert operation, but he later referred to it in his postoperative summary: "After the operation the sexual appetite of the patient increased who found the need to masturbate several times a day after leaving the hospital. This state lasted two months or so with normality coming afterward. Could this be the result of the ovarian graft? In any case one can eliminate the suggestive factor since the patient did not know until today that they had injected her with pieces of ovary." 67

The doctors had regarded the masturbatory habits reported by O.B.B. during her initial consultation as a masculine characteristic. The laparotomy was an opportunity to inject her with ovarian fragments to "feminize" her sexual behavior. She was not informed in order to ensure the authenticity of the results. Steinach's alleged "cure" of a male homosexual through testicular transplantation, which Hiriart cited in his thesis, had been criticized on the grounds that the patient's knowledge of the operation led him to act on suggestion. Although Hiriart did not define what he meant by "normality" with regard to female masturbation, he intimated that the ovarian grafts had some success in "feminizing" O.B.B. by reducing her habit. At the same time, this alleged therapeutic success contradicted his search for signs of increased virility to support his hypothesis that she was a hermaphrodite with recently modified ovo-testes. Several paragraphs later he recorded new signs of virilization such as hair on her chest and hair loss similar to male-pattern baldness. He then invoked her masturbation habits, claiming that she experienced rapid and powerful orgasms of a virile type and that a "monstrous and imperious sexual appetite obliged her to masturbate constantly."68 Consequently, he recommended that her testes be removed to defend her femininity. His tone of alarm overshadowed the fact that extirpating O.B.B.'s testes would allow a more thorough examination to determine whether or not they were ovo-testes—an obvious implication he did not explicitly mention in his thesis.

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While the final outcome of the case was unknown when Hiriart comnleted his medical thesis, O.B.B. continued to receive care from Dr. Cádiz O. In 1931, he constructed an artificial vagina for O.B.B., which precipitated her marriage. Prior to this operation, he extirpated O.B.B.'s testes and sent them to Concepción, where Lipschütz performed a more comprehensive analysis to determine if they were in fact ovo-testes. Ultimately, ovarian tissue could not be found, which rendered her a male pseudohermaphrodite according to Marañón's rubric. Lipschütz and Cádiz O. published their findings in the Valparaíso-based Medicina Moderna (Modern medicine) and the Berlinbased Archiv für Gynäkologie (Archives of gynecology), which brought the O.B.B. case back to central Europe. The German translation and publication of this report reveals mutual interests and reciprocal relations between Chile and the central European network of sexual science whose frontiers Lipschütz extended to Concepción. Meanwhile, Marañón incorporated Cádiz O.'s study of O.B.B. into his dossier of intersexual analyses of "true hermaphroditism" in the early 1930s and speculated that such conditions were underreported due to the difficulty of acquiring histological proof of ovo-testes in living patients. 69 Ultimately, the O.B.B. case circulated out of Valparaíso and back into the central European and Hispanic networks from which it emerged.

#### CONCLUSIONS

The transnational circuitry and vivid interactions that framed the O.B.B. episode illuminate Chilean contributions to sexual science in the late 1920s and early 1930s while underlining the importance of global perspectives on the formulation and reception of scientific ideas. Considered solely from a national standpoint, the O.B.B. case might be easily misread as the result of Chilean consumption of a Spanish book disseminated from Europe to Latin America. However, the mutual exchange of knowledge in the central European and Hispanic networks of sexual science that framed the case directly challenges such an impression. First, the transnational scientific exchanges between Lipschütz and Marañón not only generated Chilean interest in Marañón's theory of intersexuality but also stimulated the Spanish reception of Lipschütz's work. Second, Marañón's engagement with Lipschütz's physiological research and his incorporation of the O.B.B. case into his book reveal that Chilean science actively shaped rather than passively

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received his theory of intersexuality. Third, Chilean science contributed to the central European network of Steinach and Hirschfeld through the involvement of Hiriart, Cádiz O., and Lipschütz in the O.B.B. case and the publication of its results in Germany. Finally, tracing the movement of people and ideas connected to the O.B.B. case produces a global map that scarcely resembles an area-studies world in which Europe and Latin America constitute bounded and contrasting regions. Instead, it reveals contingent connections spread over a porous geography of scientific disciplines, international conferences, book translations, academic recruitments, nation-building projects, and ideologies that cut back and forth across Chile, Spain, and central Europe. To build a global history of sexual science that includes nations and regions previously considered beyond the purview of "Western science," the creation and circulation of ideas must be reimagined as processes that are always already transnational.

The O.B.B. case also provides crucial insight into the politics of sexual science by elucidating the formative role of ideas about the body and sexual difference in defining the contours of Chilean sex reform. The production of scientific knowledge about embodiment and sexual difference often serves to "naturalize" particular models of gender and sexuality by anchoring contingent social behaviors in seemingly inexorable biological functions. Marañón's theory of intersexuality, for example, reified a sex/gender binary by framing nonnormative bodies, genders, and sexualities as products of hormonal pathologies and developmental disorders that constituted a fluid spectrum of deviance between the polar norms. Hiriart and Cádiz O. deployed Marañón's typologies to classify national populations and correct intersexual bodies. In the case of O.B.B., the search for ovo-testes was not merely a quest for a rare scientific find but an effort to validate Marañón's taxonomy as a tool of national sex reform while determining the proper management of the patient's gender and sexuality on the basis of "true sex." The construction of sexed bodies implanted individuals with governable sexualities—a definitive political act for sexual scientists such as Marañón, Hiriart, and Cádiz O. At the same time, the spectral presence of O.B.B. in the medical documents underlines that subject formation in sexual science is not a totalizing gesture but a negotiated process rooted in dynamics of resistance and complicity, manipulation and collaboration, and liberation and repression. Indeed, an individual subject like O.B.B. often proves as elusive as those intersexual "forms so attenuated that they merge into normality itself."

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- 1. Oscar Hiriart Corvalan, "De los estados intersexuales" (MD thesis, University of Chile, 1930), 41.
  - 2. Ibid., 49.
  - 3. Ibid., 50.
- 4. See Gregorio Marañón, *Los estados intersexuales en la especie humana* (Madrid: Javier Morata, 1929); and Gregorio Marañón, *La evolución de la sexualidad y los estados intersexuales* (Madrid: Javier Morata, 1930).
- 5. Gregorio Marañón, *The Evolution of Sex and Intersexual Conditions*, trans. Warre B. Wells (London: George Allen & Unwin, 1932), 18.
  - 6. Ibid., 93-255.
- 7. In The Evolution of Sex and Intersexual Conditions, Marañón cited the Valparaíso study in the appendix to his chapter on hermaphroditism. See ibid., 327.
- 8. While a detailed analysis of Marañón's visit to Havana and its impact in Cuba is beyond the scope of this essay, it is worth noting that he presented his scientific research at the Seventh Cuban Medical Congress, the Academy of Sciences of Havana, and the Society for Hispano-Cuban Culture. He was also received by President Gerardo Machado of Cuba. See Marino Gómez-Santos, *Gregorio Marañón* (Barcelona: Plaza y Janés, 2001), 274-75.
- 9. Hernán Concha Quezada, Alexander Lipschütz en Europa (1883–1926) (Santiago de Chile: RIL Editores, 2007), 84–87.
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- 13. Chandak Sengoopta, "Glandular Politics: Experimental Biology, Clinical Medicine, and Homosexual Emancipation in Fin-de-Siècle Central Europe," *Isis* 89 (1998): 457.
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  - 16. Concha Quezada, Alexander Lipschütz en Europa, 84-86.
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- 18. Alexander Lipschütz, The Internal Secretions of the Sex Glands: The Problem of the "Puberty Gland" (Baltimore: Williams & Wilkins, 1924), 13, 351.
- 19. Sándor Ferenczi, review of *Die Pubertätsdrüse und ihre Wirkungen*, by Alexander Lipschütz, *International Journal of Psycho-Analysis 2* (1921): 145.
- 20. Sigmund Freud, *Three Essays on the Theory of Sexuality*, trans. James Strachey (New York: Basic Books, 1962), 13, 43, 81.

- 21. Ibid., 13.
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- 23. "El acuerdo de la universidad relativo al profesor señor Alejandro Lipschutz," El Sur (Concepción), November 5, 1935.
- 24. "Inauguración de la Cátedra de Fisiología del Prof. Dr. Alejandro Lipschütz en la Universidad de Concepción," *Atenea* (Concepción) 3, no. 9 (1926): 337–39.
- 25. "Universidades y laboratorios desfilan a través de una entrevista al Dr. Lipschütz," El Sur (Concepción), October 30, 1930.
- 26. "Actas de la Sociedad de Biología de Concepción (Chile)," Boletín de la Sociedad de Biología de Concepción 1, nos. 1-2 (1927): 109-10.
- 27. A. Lipschütz, "Prólogo," Boletín de la Sociedad de Biología de Concepción 2, no. 3 (1928): 1–2.
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- 30. "Discurso inaugural por el Prof. Dr. A. Lipschutz," Boletín de la Sociedad de Biología de Concepción 1, nos. 1-2 (1927): 10-11.
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  - 32. Lipschütz, El indoamericanismo, 468.
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  - 34. Ibid., 405.
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  - 63. Marañón, Evolution of Sex, 103.
  - 64. Ibid., 104-5.
  - 65. Hiriart Corvalan, "De los estados intersexuales," 50.
  - 66. Ibid., 50.
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- 68. Ibid., 50.
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