The charting of conceptual realities and challenges at play in the intersections between science and sexualities varied in scope and focus in the course of the dialogues. In Latin America, four papers explored this domain: a comprehensive review of critical theories on scientific knowledge production, including those examining science through the lenses of gender and sexuality (Camargo et al., 2011); a short analysis looking into the sexed meanings and sexing effects of scientific paradigms and methods in the diagnosis of transexuality and intersexuality (Jorge, 2011); and two other essays examining the contradictory and intertwining distinctions between sexuality (or sexual politics) and scientific paradigms and practices in the realms of sexology and of HIV and AIDS (Cáceres, 2011; Russo, 2011). In Asia, although macro-level questions such as medicalization and the links between economics and scientific production were also part of the conversation, the central focus was on technologies, or the social and political effects of scientific breakthroughs (see Ganesh, 2010; see also the chapters by Jayashree Ramakrishna and Michael Tan, in Volume I). The discussions in Africa mainly looked into the biased imprints of sexuality research paradigms and practices, including in relation to social science research (see Tamale, in Volume I), as well as addressing the limitations of scientifically driven interventions in relation to HIV/AIDS (Action Health Nigeria, 2010; Obono, 2012).

As previously mentioned the discursive deployments and disciplinary ramifications of Western breakthroughs in scientific knowledge beginning in the seventeenth century were intrinsic to the
reconfiguration of the modern state. Its logics of biopolitics and governmentality were inextricably bound up in colonial and postcolonial relations in ways that continue to influence contemporary sexual politics. But when examining this crossroads, it is important to remark that the place, meaning and power of science and technology, both in themselves and in connection with economic forces and political structures, shape present-day life worlds on a much wider and deeper scale.

Nikolas Rose’s book, *The Politics of Life Itself* (2006), provides a useful starting point for a better understanding of these scalar shifts. Rose problematizes the simplified portrayal of the early twenty-first century as the dawn of a “biotech era” and a time of new biomedical possibilities. While recognizing the new dimensions of contemporary modalities of governmentality and their relation to science, he is careful to locate present-day transformations within longer arcs of history, noting that politics has been concerned with the vitality of those who are governed for quite some time:

At the risk of simplification, one could say that the vital politics of the eighteenth and nineteenth centuries was a politics of health — of rates of birth and death, of diseases and epidemics … and of the vitality of those agglomerated in towns and cities. Across the first half of the twentieth century this concern with the health of the population and its quality became infused with a particular understanding of the inheritance of a biological constitution and the consequences of differential reproduction of different subpopulations; this seemed to oblige politicians in so many countries to try to manage the quality of the population, often coercively and sometimes murderously, in the name of the future of the race. But the vital politics of our century looks rather different. It is neither delimited by the poles of illness and health, nor focused on eliminating pathology to protect the destiny of the nation. Rather, it is concerned with our growing capacity to control, manage, engineer, reshape and modulate the very vital capacities of human beings as living creatures. It is, I suggest, a politics of “life itself”. (Nikolas Rose, 2006, p. 3)
Rose also remarks that while many themes of this new “politics of life itself” are familiar — as exemplified by issues of population control, debates around abortion and the beginning of life, or the tropes around sexually transmitted diseases, including HIV — others are entirely novel. In his view, the scalar breakthroughs in science and technology (especially biotech and information) of the last thirty years must be analyzed in articulation with marked shifts in the rationalities of government in key policy areas such as security, welfare and health. In his view, these shifts must be understood in their articulation with neoliberal logics and mechanisms of governmentality, which have implied a devolution and dispersion of bioregulatory functions to novel bioethical architectures. Such architectures rely particularly on the regulatory (and self-regulatory) mechanisms of private institutions, as in the case of clinical services (in areas like fertility, physical enhancement and body modification); pharmaceutical and biotech companies selling a wide variety of products (contraceptives, condoms, Viagra, and ARVs, to mention a few); as well as consumer groups and civil society organizations. Rose identifies five tendencies characterizing the new politics of life itself: molecularization, involving interventions at the level of molecular biology; optimization, involving technologies designed to “secure the best possible future” for their subjects; the proliferation of somatic expertise; new economies of vitality articulating links between markets and science; and subjectification, involving new ideas about what human beings are, extending to the concept of “biological citizenship” as a new subject of rights:

New biological and biomedical languages are beginning to make citizens in new ways in the calculations of experts and authorities. Concurrently persons and groups are also using biologically colored language to describe themselves or their political identities. But the contemporary biological citizens are located and moving at the intersection between the strictly biomedical and biotech realms and other regimes of language, information and politicization. One of them being very clearly human rights ... (Nikolas Rose, 2006, p. 140)

Rose presents emblematic cases of how these micro-political dynamics from below are proliferating
in the most diverse realms of biosociality and biopolitics, including fertility treatments, abortion and stem cell research but also enhancement technologies (e.g., cosmetic and “sex reassignment” surgeries). Debates over these issues contest scientific truth, project plural visions about the effects of science and raise interrogations about the connections among science, individual and collective experiences, politics, and capitalist economics. Although Rose’s ideas were not mentioned in the course of the dialogues, they offer a useful backdrop to keep in mind while exploring the material presented and debated in Hanoi, Rio and Lagos, which directly or indirectly touched on many of the same questions.

Science as an object of critical theory

The Latin American Dialogue is a good entry point through which to chart the various regional conversations on the vast and complex intersections of sexuality with science and technology. The overview paper written by Kenneth Camargo, Fabiola Rhoden and Carlos Cáceres began by recalling that, since the birth of Western science, in the transition from the Middle Ages to the Renaissance, its authority has progressively extended over practically all domains of culture and human life. The functioning of contemporary societies, the authors noted, is inextricably imbricated with the workings and impacts of science, both in their material expressions — as techno-scientific products present in almost every space of daily life — and in terms of their symbolic meanings, as a basis for reliable knowledge or a primordial source of “truth”. This historic shift and the reconfigurations of governmentality that ensued had multiple structural implications for sexuality, gender and reproduction because, as Foucault (1978) and many others have insisted, they centered on “sex” as a pivot articulating the individual and the species, bodies and state politics. Darwin’s theories on sexed reproduction and the evolution of the species, in *The Origin of Species* (1859) and *The Descent of Man, and Selection in Relation to Sex* (1871), provided the basis for a “science of sex”.

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As Jane Russo (2011) observed in her essay on sexology and its effects on sexual politics, presented at the Latin American Dialogue, early sexology was crafted to contest repressive religious doctrines on sexual behavior and most principally to argue in scientific terms against the criminalization of same-sex relations in the German Penal Code of 1871 (see also Corrêa, Petchesky, & Parker, 2008; Bozon & Leridon, 1996; Weeks, 1985, 2000). She usefully notes therefore that, in those early days, there was much overlap and convergence between the “science of sex,” mostly defined in biological and biomedical terms, and sexual politics, involving public efforts and social mobilization aimed at reforming sexual regulations. The most compelling illustration of this intertwining is found in the life and work of Magnus Hirshfeld, one of the “inventors of homosexuality”, himself a doctor and a radical sexual reformer who would become an important target of Nazism in the 1930s.

But as we know, the new science also legitimated the modern idea of a universal human sexual instinct that could explain all desires, behaviors and identities, regardless of place and time. The sexual categories and taxonomies it defined generated a hierarchy of sexual identities and practices, placing reproductive heterosexual behavior at its top — in other words, scientifically consecrating cultural and juridical heteronormativity (Rubin, 1984). It also overlapped in dangerous ways with eugenics, whose central concern was the degeneracy of the white race and the uncontrolled reproduction of those deemed to be dangerous — the poor, non-white races, criminals and the “unfit”.

The struggles in sexual politics since the sexual revolutions of the 1960s have been as much about sex disciplining through scientific discourses and technologies as about the state and the law. Thus the systematic critique of science and scientific endeavors, particularly in the domain of the biosciences, is a central bulwark of those struggles. With this in mind, one of the main contributions

22 The legacies of these studies were remarkable: the Freudian sexual drive, the invention of homosexuality (Ulrichs and Hirshfeld) and the variability of sexual desires and practices of Krafft-Ebing’s Psychopathia Sexualis (Krafft-Ebing, 1939 [orig. 1886]).
of the paper by Camargo, Rhoden and Cáceres was to retrace the long cycle of “disaffection with science”. As the authors noted, secular critiques of the modern scientific paradigm have accompanied the history of science itself since the early days of the Enlightenment, when David Hume questioned the assumptions of objectivity and inductive logic of scientific thought. The paper provides a detailed chronology of critical theory of science in the twentieth century, reminding us that it did not originate from societal contestation but as an effect of the crisis of scientific certainty that followed the debates around the general theory of relativity and the findings of quantum physics. Twentieth-century discontent starts with the logical positivists of the 1920s, later to include Karl Popper (1989), Thomas Kuhn (1962), and contemporary “science studies”.

With respect to Kuhn’s vision the authors appraise the publication in 1962 of the first version of *The Structure of Scientific Revolutions* as a turning point in critical theory of science. This is so because, first, for Kuhn, the knowing subject is not the individual scientist but communities of researchers whose extra-cognitive profiles influence research methods and results; and second, because after Kuhn the history of science is no longer understood as a continuous accumulation that is always growing, but rather as a succession of crises and revolutions. From Kuhn onward, the proposition that a single criterion of demarcation should be applied to all sciences became obsolete, with clear implications for the ongoing tensions and debates around “hard” versus “soft” sciences.

To define the scope and the project of contemporary *science studies*, the authors draw on the work of Bruno Latour, who is one of the leading authors in this field: “Science studies is the English word … [But] whatever the label, the question at stake is to retie the Gordian knot, as many times as necessary, to overcome the gap that separates exact knowledge, the exercise of power, nature and culture”. (Latour, 1994, pp. 8–9). The merit of this historical recapturing and epistemological mapping is to remind us that the discontent with science has much broader contours than the field of sexual and gender politics; within it there are various streams that conceive science and scientific discourse as social constructions — contingent and traversed by power, economic effects
and the situatedness of the subjects who produce it (see also Latour & Callon, 1991).

In other words, these intellectual efforts in the wider field of science studies converge, in epistemological terms, with theories of gender and sexuality informed by social constructionism, postmodernism, or symbolic interactionism. While acknowledging the political relevance of critical theory of the history of science, Camargo and co-authors caution, however, against easy recourse to simplistic “radical” critiques that reduce scientific knowledge to mere ideology. In their view, the necessary recognition of the “structural impurities” of science should not entirely invalidate its premises. Citing the feminist theorist Donna Haraway (1988, 2004), they argue that even while recognizing that the production of scientific knowledge is always partial and situated, we should not entirely abandon the possibility of greater objectivity. In their view, these critiques should motivate the increased social responsibility of science theorists and practitioners. Scientific endeavors, in their various manifestations, should be subject to self-critical reflection about their potentially detrimental impact on people’s lives. Practitioners must establish channels of communication with society, particularly with those most affected by their work, to enable prudent knowledge for the enhancement of a good life for all (dos Santos, 1989). As we know, however, this is much more easily said than done. It is precisely at this crossroads that the struggles for biological citizenship analyzed by Rose have been proliferating in recent decades.

When examining specifically the critical conceptual lenses of gender and sexuality in relation to the biases and effects of science, the Latin American overview paper starts by revisiting the trajectory of feminism in this domain. Based on the work of Sandra Harding (1986), it distinguishes three different currents of thought: 1) feminist empiricism that agrees with the scientific project but criticizes the effects of androcentrism, characterizing it as bad science; 2) a feminist standpoint that advocates for the production of scientific knowledge based on women’s experience; 3) postmodern feminist approaches that wrestle directly with the epistemological foundations of science, identifying the heteronormative and androcentric assumptions always underlying the apparent neutrality and
objectivity of research and scientific reasoning.

The Latin American overview paper calls attention to the fact that this third stream, while including thinkers from other disciplines, is largely formed by feminists who are themselves scientists (generally biologists), as in the case of Ruth Hubbard (1997), Donna Haraway (1988, 2004) and Anne Fausto-Sterling (2000). These authors interrogate scientific assumptions and conclusions about gender and sexuality, not from outside but from within the scientific realm, contesting both the essentialism of hard sciences and the conceptions of the social sciences, including feminist theorizing and research. For example, these authors have sharply challenged the binary logic that characterizes the classic feminist perspective on sex and gender, in which the first corresponds to biology and the second to the cultural layer that transforms organic material in social practice. Citing Anne Fausto-Sterling (2000), the paper emphasizes the limitations of simplistic and binary logics that conceive biology and culture in terms of layers. Far from forming either an opposition or an “inside” (biological) layer and an “outside” (cultural) surface, the lived world of bio-existence and social relations is one of constant and complex interaction and symbiosis. In order to capture more precisely the overlaps and disconnections between nature and culture, both natural and social science frames must be complexified.

In relation specifically to scientific discourse on sexuality, the paper returns to Foucault and Jeffrey Weeks as fundamental references to understand the historicity, complexity and depth of connections between science, sexuality and politics in the contemporary era. In addition, it examines the contributions of symbolic interactionism, social psychology and cultural studies (cultural scenarios and scripts) to constructivist perspectives on sexuality. Finally, the authors recognize the indisputable contributions of queer theory to contemporary studies of sexuality, particularly in its critiques of the heteronormative order and its resonance with feminist theorizing on binary thinking about gender and sexuality (Butler, 1990; 1994; Sedwick, 1990).
Science and Technology

The scientific and technological revolutions underway since the 1970s not only constitute one of the main forces driving economic globalization (Sen, 1997; see above); they have also had profound effects on sexual cultures and identities. Of course this is not an entirely new phenomenon, as technological changes, most often linked to major economic shifts, have long had a major impact on key aspects of sexuality. For example, John D’Emilio’s by now classic analysis in his article, “Capitalism and Gay Identity” (1983), examines how the industrial revolution and the shift from domestic household production to industrial capitalist development provided the conditions for gay and lesbian identities and communities to begin to emerge. By drawing both men and women out of households and into the market, industrial capitalist development began to pull the rug out from under the “traditional” heterosexual family as the key unit of economic production and began to place new emphasis on the sale of individual labor power as the key to economic exchange. This, in turn, was linked to the transformation of the family from the site of economic production to the location for emotional security and affection. It also contributed to a steady decline in birth rates, as procreation gradually became disconnected from sexual pleasure as the key feature of sexual life.

As preindustrial modes of economic production gave way to industrial technological development, associated patterns of urbanization created a fundamentally new set of social, cultural, economic and political contexts in which men and women attracted to their own sex could begin to fashion a new identity and way of life based on their sexual feelings. These changes simultaneously began to open up new options for heterosexual women as well, who also found new possibilities for greater independence and sexual freedom within the context of the evolving industrial capitalist economy (D’Emilio & Freedman, 1988). While their impact was first felt as a result of the industrial revolution that took place in Europe and North America, over time the changes would gradually extend across the so-called “developing world” in the global South as well, though often through a process that reflected many aspects of the technological and economic dependence that characterized late-
twentieth century patterns of development (Parker, 1999).

Just as technological change, linked to economic transformations, has had a broad impact on the changing history of sexuality globally, it has taken on special importance under conditions of increasingly rapid globalization — conditions both stimulated by (and stimulating) rapidly changing communications and media technologies. It is clear that the whole issue of technology and technological innovation as they relate to sexuality, sexual identity and sexual health constitutes especially rich ground in need of both conceptual elaboration and empirical research. As Lenore Manderson has argued in an important edited volume that was inspired by discussions at the Asian Regional Dialogue in Hanoi (Manderson, 2012), technologies shape sex and sexuality in powerful ways, affecting perceptions, behaviors and relationships. They are not simply things or artifacts but dynamic processes, practices and institutional arrangements:

The technologies that shape sex, identity and sexual health are extensive. They include increasingly globalised items, such as pharmaceuticals for contraception, conception and sexual function. They include also the sexual practices and health outcomes that are made possible or that transpire as a result. They include too the expanded and increasingly globalised clinical environment that operates — with its own multiple technologies — to assist in reproduction and in aligning bodies and sexual and gender identity. And they include the materials and practices incorporated into people’s everyday lives for pleasure and symbolic and functional purpose. Initiation and bodily embellishment are one example of how products and practices meet; adult shops and clubs are another. The term technology works, too, to describe behavior … [as in the case of] sexual violence as a technology of power … Consequently, a technology of sexuality is as tangible and as mundane as a condom, as tawdry and as fanciful as edible underwear, yet as elusive, immaterial but equally manifest, as an ideology of sexuality, or the threat of assault that informs the gendered and heterosexist use of space. (Lenore Manderson, 2012, pp. 1–2)
What is perhaps most striking, however, about this remarkable technological complexity, is the way in which it can serve a wide range of different ends. On the one hand, it is central to the many ways in which sex and sexuality become commoditized in the early twenty-first century, especially through the influence of the Internet. Markets are produced for sexual services, of course, but also for sexual products of diverse types, for the enhancement of sexual performance, for the treatment of sexually transmitted infections, and a range of other technologies that might have been unimaginable just a few years ago. Indeed, it is almost impossible to overstate the extent to which the flows of images and ideas that are associated with both globalization and the information age, in turn made possible through the flows of technology that Appadurai described as technoscapes (Appadurai, 1996), have transformed the imagination of sexual possibilities, making sexuality one of the major fields of meaning and power in which the effects of globalization have been manifest.

Against this backdrop, it is also worth considering the discussion at the Asian Dialogue on how the development and dissemination of new information and communication technologies (ICTs) are simultaneously transforming sexualities and restructuring the boundaries between public and private and, potentially, political debate. In his presentation at the Asian Dialogue (included in Volume I) the anthropologist Michael Tan, from the University of the Philippines, described how new ICTs are transforming the structures of public spheres in Asian societies. In particular, Tan recognized the various ways in which e-commerce, widespread access to cell phones and social networking sites, among other innovations, have transformed sexual landscapes and created arenas for people to “[build] identities around gender and sexuality”. These changes have in some instances given rise to new “subaltern counterpublics”, communities that produce alternative understandings of identity and justice, which are subsequently introduced into national public debates (Fraser, 1990). In this respect, they have the potential to become spaces of resistance for excluded groups. Even in the context of China, where the Internet is heavily monitored, as Cai Yiping observed at the Interregional Dialogue, it has become “the most democratic space” in the country, with “debates underway about a wide range of issues related to sexuality, ranging from the gender based violence to LGBT rights,
prostitution, [and] commercial sex work, among others".23

Along similar lines, also at the Asian Dialogue, Indira Maya Ganesh (Ganesh, 2010) discussed the impact of cell phones on the possibilities for social and sexual interaction of *kothis* in Mumbai, India. *Kothi*, she explained, is an identity adopted by both working and middle class “biological males representing a shifting space of femininities.” Drawing on ethnographic research, Ganesh noted how cell phones can become status markers that facilitate social and sexual interactions across class lines as well as opening possibilities for a kind of “mobile citizenship”: “Mobility has particular resonance for kothis. Kothis’ traversing multiple subjectivities closely mirrors the kind of movement that mobile telephony allows. This sort of mobility between subjectivities and places implies a kind of statelessness, a sense of being free-floating and unhindered by boundaries and borders, and therefore, laws”. Ganesh’s observations are notable in part because they speak to the uses of new technologies by economically marginalized sectors of society. In this respect, they challenge understandings that map dichotomies between local and global unproblematically across class lines, equating cultural globalization with elite cosmopolitanism. Yet Ganesh further notes that the possibilities opened by cell phones are not entirely rosy, pointing, for example, to the new dangers they pose for possible surveillance and blackmail (particularly in the present context of the country’s criminalization of sodomy, re instituted by the Indian Supreme Court in 2013).

Moreover, as Tan further argued in his presentation, new technologies can reinforce as well as undercut underlying class disparities, depending in part on the technology in question. Hence, while cell phones have been widely disseminated, access to Internet through computers in the global

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South remains quite skewed (International Telecommunication Union, 2014). More generally, in the discussions at the Asian Dialogue, some participants pointed out that while new technologies can create opportunities for individuals, they do not necessarily challenge larger social structures. In this regard, for example, they noted how on-line communities may create an illusion of an off-line community, once again distorted by the parameters of who has access (extending classical critiques of the democratic public sphere noted earlier). In some countries (and transnationally, we might add) gay and lesbian groups may have an enormous on-line presence but no off-line reality, giving rise to “technological ghettoes”.

These scalar technological innovations in communication have definitely opened new possibilities for political resistance and democratic engagement as sharply illustrated by the research findings of the global exploratory EroTICS research project (sm Kee, 2011). The study mapped how the web is helping Indian young women learn about sex and gain autonomy and becoming a source of exchange and information for trans people in South Africa. It analyzed the Internet as a key political mobilizing tool used by LGBT people in Lebanon and examined the complex micro-political dynamics of how dissident sexualities are manifest and performed on the Brazilian web. Yet the same findings also detected expanding trends of state censorship and forms of vigilantism, quite often triggered by sexuality-based moral panics. Moreover, the possibilities opened by the Internet for a politics of resistance in sexual matters are inevitably in tension with the consumerist culture that also pervades the web, whose effects could be decidedly depoliticizing.

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24 In its 2012 Report Measuring the Information Society the International Communication Unit informs that between 2001 and 2011 the worldwide number of cell phone users rose from 18 to 85 percent. Meanwhile household broadband subscriptions increased from 10 to 34 percent. In the global South, users of cell phones jumped from 10 to 78 percent of the population, while the percentage of households with broadband Internet connections increased from zero to 8 percent.
The *corpus sexualis* of science

The essay written by Juan Carlos Jorge (2011), from the University of Puerto Rico, presented and discussed in Rio, compellingly illustrates how biomedical scientific paradigms translate into medical practices, social representations and violations of bodily integrity. According to Jorge, since 1910, when chromosomes were discovered, the male/female binary has been deeply imprinted onto the scientific criteria and parameters used to determine people’s sexual identity, with the formula 46 XX and 46 XY. In the course of the twentieth century, gonad tissue studies and neural research on brain functioning compounded these early genetic studies and definitions, deepening and expanding the binary imprint of sexed bodies and gender identity in biomedical mindsets, methodological frames and practices.

Jorge’s essay, however, also reports that research in the last few decades, informed by molecular biology and new methods of investigation, is revealing that processes of sexual differentiation in humans are much more complex and variable across the life cycle than what is proposed by dominant scientific paradigms. Or, in the words of the Portuguese embryologist Clara Pinto-Correia, “Sex determination in mammals remains a giant and unresolved puzzle” (Pinto-Correia, 1997, p. 261). Scientific evidence, even collected within the biomedical paradigm, now raises questions about the foundational notion that a female is just absence of what produces a male or that female becoming is a passive biological process (Manolakau et al., 2006). Yet, Jorge observes, these findings have not reached any textbook of medicine or molecular biology, much less the mainstream media. This last observation on the media is very important, as Paula Machado noted in her comments on the session on sexuality and science at the Latin American Dialogue, because of the ways in which both scientific and popular media address, interpret and disseminate research findings on the sexual body, never incorporate incorporating critical views on the subject such as the ones biologists like Anne Fausto-Sterling or even Stephen Jay Gould have developed.
In Machado’s view, the scientific understandings of sex and gender as biological binary imprints, critically analyzed by Jorge, constitute scientifically grounded “passports to reality” associated with ideas of progress, advancement, development and welfare: in short, conceptions of “modernization” that remain compelling everywhere, including the global South (see de la Dehesa and Pecheny in Volume I). These “passports to reality” do not remain confined in labs and clinical settings. They have powerful political impacts, as they circulate intensively in public spheres, including through the media, and contribute to shape the rationales for laws and public policies. This is particularly evident in regard to public policies determining access to and criteria and practices of medical interventions concerning transgender and intersexual health and legal status, for example the requirement of psychiatric diagnosis or sterilization as a prerequisite of sex reassignment procedures for trans persons. Even when these assumptions do not translate into juridical statutes but remain confined to medical protocols, they have political consequences in that they determine how the state apparatus will recognize a person as an embodied citizen or, more importantly, may violate his/her fundamental rights in the name of science. The most glaring example here is the widespread recourse, across the most diverse cultures, to surgical interventions aimed at correcting the perceived sex/gender imperfections of intersex children. Jorge’s essay recaptures the tragic story of one such intervention:

Last year we have published the case of a person with congenital adrenal hyperplasia (Jorge et al. 2008). The clinical algorithm for this form of intersexuality defines that intervention should occur early in development of children to prevent masculinization not only in terms of corporeal intelligibility but in psychic terms. The doctors in charge followed the clinical protocol proposed by the American Academy of Pediatrics. They measured the phallus, established the karyotype profile, tried to determine [sexual] identity of the gonad, and measured the hormones. Doctors have read the “sex” of the person, and Juan was “made intelligible” as a female even though he identifies himself and continues to live as a male. The biomedical knowledge created Juan out of Ana by assembling pieces of the “sexual
corpus,” exactly as Dr. Frankenstein shaped his creature. (Jorge, 2011, p. 6)

Not surprisingly, political struggles in relation to the pathologization of intersexuality and systematic violations of human rights resulting from the biomedical management of intersex children’s bodies today constitute one of the most heated zones of biological citizenship battles. These battles range from micro-level contestations to debates about clinical protocols and processes of legal reforms. The societal mobilization that led to passage of the Argentine Gender Identity Law in 2012, for example, demonstrates that activist movements can resist and transform dominant biopolitical practices through a combination of political action, bottom-up consensus building and insistence on human rights premises and arguments. Internationally, such efforts have extended to initiatives aimed at reframing existing biomedical protocols in the International Classification of Diseases of the World Health Organization and the Diagnostic and Statistical Manual of the American Psychiatric Association, calling for de-pathologization of sexual and gender categories and procedures.

These efforts involve biomedical researchers and practitioners as well as the persons whose bodies and lives have been subjected under these protocols. In some cases they are bound to participatory frames designed to rebalance north–south disparities, often flagrant in the context of global struggles around biological citizenship. Such initiatives are quite significant in light of what Jorge and other participants of the Latin American Dialogue analyzed as the geopolitics of the “scientific corpus sexualis”, marked by the hegemony of scientific institutions based in the global North, particularly US-based organizations such as the American Association of Pediatrics and the

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25 The Argentinian Gender identity law enables persons to change their name and gender on official documents such as birth certificates and access to required health care without a psychiatric diagnosis. This conceptual and political frame does not rely on victimization, avoids the gender binary, and opens the possibility for the law to recognize the “shifting nature of sexual identities”.

26 One example is the global initiative coordinated by GATE – Global Action for Trans Equality – to establish a critical platform to intervene in the revision of the International Classification of Diseases, while balancing power differentials between North and South (see http://transactivists.org/trans).
American Psychiatric Association, whose research and clinical management protocols are adopted worldwide without much questioning.27

The dialogues, however, also revealed that these analyses, concerns and obstacles are not specific to research and clinical practices related to gender identity, transexuality and intersexuality. Rather, they are easily identifiable in many other quarters of sexual health and rights, arguably falling under the umbrella of a globalized “medicalization”.

“Medicalization” and beyond

Camargo and his co-authors argue that we must always scrutinize the problem of medicalization in its complex connections with the global political economy of health and biomedicine. Economic interests fabricate diseases and define them to include greater numbers in order to increase the market for certain pharmaceutical products (Cassels & Moynihan, 2005, Conrad, 2007), and the companies and research institutes responsible for their creation and promotion are overwhelmingly based in the global North. The paper also distinguishes globalized medicalization from what some authors portray as medical imperialism, which, in addition to economic dominance and interests, also encompasses the prescriptive, exclusionary and disciplinary elements of “medical order”. These insights from the Latin American meeting echoed debates that had taken place a few months earlier in Hanoi, for example Ramakrishna’s analysis that:

27 In relation to this particular challenge Jorge proposes a multipronged and long-term agenda of research and political mobilizing that is worth sharing. It includes: a) the documentation of global (vertical and horizontal) exchange of scientists, especially in the disciplines of psychiatry and clinical psychology, involved in research on transexuality and intersexuality; b) study of the geopolitical agendas of governments and multinational companies as well as of the political economy of credit and financing of scientific research in these realms; c) a critical statistical system to monitor and contrast transnational data on the incidence and prevalence of gender identity and health issues; d) the global mapping of medical and legal management of sexualities worldwide; and e) mechanisms to facilitate the dissemination of this information and other knowledge among experts and activists of all genders and sexualities.
Medicalization, has been a major intellectual trend of the twentieth and twenty-first centuries. Increasingly medical and biomedical modes of thought dominate the discourse on sexuality, and medical authority over many domains that were hitherto considered social conditions or life experience, is unquestioned … This medicalization of society … has resulted in the transformation of the human condition into treatable disorders. This recasting of social conditions as disease in the biomedical framework has drawn attention away from the social, cultural, economic and political causes that influence these “diseases” … Medicalization is not solely due to the medical professionals. The pharmaceutical industry, biotechnology, the development of consumerism, direct advertisement to consumers, as well as insurance and government policies play a significant role (Ramakrishna, 2013, p. 165).

Ramakrishna analyzes similarities and differences in the circulation and marketing of Viagra and condoms in India, an assessment that highlights how neoliberal markets and frames of governance exacerbate medicalization’s problematic effects. In both cases, the production and distribution of these products effectively ignore local constructions of sexuality and the economic and political contexts where sex occurs. And while their portability and the discretion they offer the consumer in determining their use represent certain advantages, the technologies must also be understood as belonging to new modalities of health governance that transfer to individuals a greater share of responsibility for their own care and wellbeing.

While recognizing powerful forces driving this trend, the papers presented by Jane Russo and Carlos Cáceres at the Latin American Dialogue complicated linear accounts of medicalization by underscoring contestation within and the potential political power of biomedical fields. In this regard, Russo emphasized that while early sexology was inscribed in a biomedical paradigm, it was decidedly political, recalling that it was fundamentally a European intellectual and professional field (almost totally German) that was swept from the scientific and political scene with the rise of Nazi fascism. Second-wave sexology, in contrast, blossomed in the United States following World War II,
a geographic shift entailing significant inflections in terms of methods, approaches and objects of research. While early sexology combined “clinical work” with a sexual politics of reform, American sexology in the mid-twentieth century tended to focus on heterosexuality (or, as Russo put it, “the sexuality of the normal man”) and favored quantitative methods to research sexual behavior, with Alfred Kinsey’s work being a paradigmatic example.

Despite its quantitative focus, Kinsey and his research team — who were scientists guided by both intellectual openness and life experimentation — broke through these parameters, investigating homosexual and other practices considered deviant. In the conservative political and moral climate of the 1950s, despite the uncontested popular success of Kinsey’s findings, Kinsey himself and his research institute were targeted by the House Unamerican Activities Committee, and this line of research would be suspended, with long-term detrimental impacts on sexuality research in the US (Bullough, 1994, 1998; Di Mauro, 1995).

Kinsey’s successors were William Masters and Virginia Johnson, he a gynecologist and she a psychologist, whose work further normalized sexuality research in the US by focusing on the laboratory-based study of the sexual responses of heterosexual couples. According to Russo, this second phase of US-based sexology represented a shift toward mainstreaming and de-politicization, in light of which the “first sexology” appears highly political or even radical. Under the impact of the sexual revolutions of the 1960s and 1970s, however, new forms of politicization emerged, leading to the first open societal confrontation with biomedical discourses and practices that target sexuality. These rebellions focused primarily on the pathologization of homosexuality in psychiatric protocols and even sexology manuals. In the United States and Europe, gay and lesbian movements systematically

28 This post–Second World War blossoming was, however, preceded by less visible investments in sexuality and sexual behavior research (see Corrêa, Petchesky & Parker, 2008).
organized protests at sexology, psychology and psychiatry conferences, until homosexuality was finally eliminated from the Diagnostic and Statistical Manual of Mental Disorders (DSM) in 1973 and from the International Classification of Diseases (ICD) in 1990. These events would have a long-term impact on the field of sexology. By the 1990s, once again influenced by global cultural transformations, national processes of democratization, and international policy debates, the old World Association of Sexology (WAS) changed its name to World Association for Sexual Health. And in 1999, the organization adopted a Declaration of Sexual Rights, inspired by the political proposals constructed by feminist and LGBTQI movements since the 1970s.29

This shift might be interpreted as a re-politicization of sexology, yet, as Russo noted, it took form at the same time and in tension with the development of “sexual medicine”. Having begun as a branch of urology in the 1980s, “sexual medicine experienced a scalar expansion in recent decades, particularly after the global success of drugs for erectile dysfunction”. As was also noted at the Asian Dialogue, this recent boom in sexual medicine is associated with the power and interests of the pharmaceutical industry and thus is interwoven with libertarian tropes that affirm the pursuit of sexual pleasure as a personal choice, echoing the consumer ethos advanced by neoliberal economic and cultural policies. According to Russo, the emphasis on sexual performance and behavior, already present in Masters’ and Johnson’s research and clinical work, is now taken to the extreme, by totally voiding from the picture of sexual experience and sexual pleasure the relational aspects of sexuality. Sexual medicine is revamping the “medicalization of sex” in ways that reify the centrality of intercourse and the dominance of male physiology and genitalia in the endeavors of sexual pleasure. If a repoliticization of sexology is underway, it is evolving in complex

29 It should be noted that political struggles against psychiatric sexual classifications have not ended there. A few years ago, as a new revision of the APA Diagnostic and Statistical Manual of Mental Disorders (DSM 6) began, trans communities in different parts of the world launched a series of campaigns against the pathologization of transexuality. Furthermore, as the WHO International Classification of Diseases is also under revision, important advocacy efforts are also underway that aim at radically altering the current definitions and parameters in relation to transexuality and intersexuality, under the leadership of Global Action for Trans Equality (GATE).
articulation and at times tension with these impulses toward medicalization.

The work presented by Carlos Cáceres, “Transforming the discourse on HIV as a sexual epidemic: Paradoxes and enigmas of the global response”, also focused on tensions surrounding recent processes of medicalization. Cáceres examined the historic trajectory of the global response to HIV and AIDS, highlighting the radical changes in sexuality research priorities in recent years. He began by reminding us of the centrality of sexuality in the first two decades of the epidemic and its effects on the creation of public spaces for sexual subjects and sexual discourses to become visible. He then offered a detailed analysis of how, in the last thirty years of global and regional conferences, a wide range of political and social actors and international agencies has played distinct and sometimes contradictory roles in the construction of the global response to the epidemic. In particular, he delved into the unresolved tensions between techno-scientific biomedical approaches and social scientific approaches that have characterized research and policy debates around HIV and AIDS since the 1980s. Over the years, he notes palpable trends toward increasing medicalization and a parallel de-sexualization of discourses on and policy responses to the epidemics.

Cáceres considers the discovery of anti-retrovirals (ARVs) in the mid-1990s the first key landmark in this shift. If, on the one hand, ARVs allowed the containment of the epidemic, on the other, they also implied the gradual resurgence of biomedical approaches as the privileged response to the AIDS crisis. Since then the differences and tensions between more socially and culturally oriented and more biomedical and policy oriented strategies have deepened. Today these tensions are clearly evident in the context of debates and proposals on prevention, more specifically in relation to the new emphasis on evidence-based methods involving biomedical interventions, such as circumcision and ARV prophylaxis in the case of groups exposed to high vulnerability. According to Cáceres, the growing hegemony of the view that new biomedical technologies are the best solution to prevent HIV/AIDS has opened a dangerous path. This tendency is also convergent with what the Hanoi dialogue identified as new modalities of health governance that transfer to individuals a greater
share of responsibility for their own care.

Participants at the Latin American meeting pointed out that, by de-sexualizing HIV prevention, evidence-based methods seem to be used in policy discourses and practices as a way to deflect escalating attacks by dogmatic religious forces and other conservative sectors on open discussions of sexual practices and sexuality education for HIV prevention and condom use. At the same time, new technologies designed to reduce HIV infections also appear to have gained much appeal among some powerful institutional actors because they facilitate the “hygiene” focus of debates over prevention strategies that, in the view of these actors, became excessively overloaded with sexual meanings. Like biomedical interventions, the new evidence-based HIV prevention methods potentially conceal the social, cultural and economic contexts within which sex occurs and sexuality is located, ignoring the factors and conditions of vulnerability that may restrict people’s ability to protect themselves against infections.

The myopia of this narrow biomedical lens became evident in the analyses and discussions that took place at the African Dialogue. Bernice Heloo (2010) examined the thorny gendered, social, economic and political issues underlying the vulnerability to and unrelenting spread of HIV among African women. Although recognizing the biological factors that place women at greater risk of infection in heterosexual intercourse, she also emphasized the weight of patriarchal gender norms and prevailing social constructions of masculinity and femininity that do not leave much space for female sexual agency. These conditions are deeply connected to women’s economic dependence on men and social-cultural traditions, discourses and practices that further accentuate gender inequalities. She mentioned, for example, the restrictive role of the Christian religion, as exemplified by the Catholic Church’s prohibition of condom use, but also referred to widespread African practices, such as a wide range of sexual taboos, child and forced marriages, some initiation rites that involve cutting of the skin or organ, as in the case of FGM and spear sex (practices in certain eastern African countries), or simply the obligation for women to submit to the sexual urges of men. While
recognizing the need for methods of prevention controlled by women, such as female condoms, microbicides and pre- and post-exposure prophylaxis, Heloo and many other participants insisted that these technologies should not be regarded as silver bullets that will automatically eliminate this complex gamut of social, economic and cultural dimensions and determinants.

Neli Khuzwayo’s (2010) presentation at the African Dialogue on the failures of a Post-Exposure Prophylaxis (PEP) project of HIV prevention among rape survivors in South Africa likewise revealed the limitations of biomedical interventions that ignore the cultural contexts in which they are implemented. The program’s protocol required that, before PEP is administered, an HIV test must be conducted, the drug must be administered within 72 hours of exposure and it must be taken twice a day for 28 days. The major factor behind the program’s failure was non-adherence to prescriptions of the medication. The study reveals that only four out of sixteen rape survivors completed the medication as recommended. The explanation for the lack of adherence is the social barriers stemming from stigma and lack of support from family, community and friends. Most survivors kept the rape experience secret from their family to avoid rejection and social isolation, and consequently no social networks were formed to persuade and empower women who felt discouraged to continue taking their medication. The discussions around this failed and frustrating experiment led the participants of the dialogue in Lagos to conclude that the main problematic feature of medicalized models, such as PEP, is that they are designed and implemented as if HIV prevention occurred in a vacuum when, in fact, the life worlds in which infections occur are spaces filled with social, structural and cultural constraints.

Once again Sylvia Tamale’s paper provides sharp insights that can further illuminate the complexities, contradictions, power fluxes, political battles and resistances at work in the intersections between sexualities and scientific endeavors. Tamale lamented “a wasted decade of AIDS research that has failed to get to the bottom of the complexities of AIDS, especially among poor communities”. In fact, HIV provided the opportunity for a resurgence of colonial modes of studying sexuality in
Africa — “racist, moralistic, paternalistic and steeped in liberal thinking” (included in Volume I). While recognizing that it is crucial to sustain epistemological critiques and political contestations of biomedical paradigms and practices, Tamale strongly emphasized that social science should not be exempt from the same systematic critical scrutiny. When examined from a situated African perspective, historians, philosophers, anthropologists, sociologists, psychologists, demographers — including those who define themselves as feminists — share responsibility for the continued construction of distorted images of and assumptions about African sexualities. Among other illustrations, Tamale in her paper in the first volume of this publication scrutinized the obsession of social anthropologists and women’s rights advocates from the global North with female genital mutilation and the traces of an imperialist, colonial project in this obsession:

The bulk of approaches to the subject matter are culturally insensitive, focus narrowly on the negative aspects of female circumcision and completely overlook the multifaceted nature of the practice and the meanings attached to the rituals associated with it. Although African feminists do not condone the negative aspects of the practice, they take strong exception to the imperialist, racist and dehumanizing infantilization of African women. (Sylvia Tamale, 2013, p. 29)