Sexual Datafication

Sexuality and Biopower

The history of sexuality is also the history of power. Regulating sexual behaviour has been central to judicial, religious and medico-scientific systems of power; to rendering populations economically productive (Hennessy 2017; Floyd 2009; Canaday 2009; Federici 2004; Turner 1992); to colonialism (Said 1978; Fanon 1952); and to the formation of national identities (Richardson 1998; Doty 1996; Mosse 1985; Nagel 1998). The physicality of sex and the body epitomise the material substrate of power and the shaping of sexual relationships and subjectivities gives power an intimate 'in'. Sexuality is also a nexus for other sites on which power acts, such as class, ethnicity, (dis)ability and gender. Susan Stryker describes, for example, the 'somaticization by individuals of the bodily norms and ideals that regulate the entire population to which they belong' as 'conjoined by the domain of sexuality.' (Stryker, 2014: 38; see also Ceyhan 2012).

The ways sexual practices and subjectivities have been historically disciplined and shaped constitute an ur- form of biopower (Foucault 2020; see also anatamo-politics Foucault 2020: 132) and 'biovalue' (Waldby 2002; Rose 2008). The history of sexuality makes visible the way power operates on people and how it makes them valuable. The disciplinary imperatives enacted on the sexual body have always been intertwined with its economisation, placing on a longer historical continuum what Nikolas Rose describes as a current 'reshaping of human beings […] within a new political economy of life in which […] biopolitics has become bioeconomics' (Rose 2007a: 17; see also Birch and Tyfield 2013; Rajan 2006; Morini and Fumagalli 2010; Helmreich 2008: 463). Sexuality and the sexual body have been shaped by power both in the sense of 'organizing and exploiting the materiality of the body' (Waldby 1997: 228; see also Repo 2013; Morini and Fumagalli 2010: 240) and in the manipulation of the 'collective affects' – 'passion, emotion, feeling or sentiment' – that are 'part of the "conditions" for the birth of forms of biopower' (Anderson 2010: 31, 30; see also Rose 2001: 18; Rose 2007).

The policing of sexual practices and the oversubscription of sexualness on particular groups demonstrates the continuing relevance of biopower to understanding contemporary sexuality. In October 2021, the Italian senate rejected a bill to outlaw crime against LGBT

people. Russia's parliament banned 'LGBT propaganda' a year later (Sauer 2022). In 2023, British Prime minister Rishi Sunak blocked legislation in Scotland's Gender Reform Bill that would make it less difficult for trans people to change their gender. North America has overturned women's legal right to abortion and anti-drag and anti-trans legislation is sweeping the country. Protests have spread across Iran since autumn 2022 over the institutionalised misogyny of compulsory hijab wearing and murder and beatings by the 'morality' police. The (violent) disciplining of sexualities continues to be at the heart of the never-ending struggle between people and power.

Sexual Datafication

The concept of sexual datafication explored in this special issue takes as its starting point that data is a major form and conduit of biopower (Mutuku and Mahihu 2014; Prieto-Nanez 2016; Mavhunga 2017; Benjamin 2019; Taylor and Broeders 2015; Kitchin 2016; Zuboff 2019) and that data is crucial to understanding the relationship between contemporary biopolitics and sexuality. The 'digital data economy' (Lupton 2016: 4) shapes global cartographies of power. Big data mediates increasingly between state institutions and citizens. The objects and virtual infrastructures of datafication – smart technologies, wearables, platforms, apps etc. – are also hugely culturally influential. The term sexual datafication was first introduced in *Bodies of Work: the Labour of Sex in the Digital Age* (Saunders 2020) to describe the impact of datafication on the material practises of sex within the digital pornography industry. This special issue develops the concept to show how datafication as a form of biopower shapes sexuality in governmental, political economic and broader cultural contexts. The term describes varied ways in which data gathering and management are brought into relation with sexuality and the sexual body.

Sexuality is used here to describe: the institutions, spaces and temporalities that shape sexual subjectivities and through which sexual cultures develop; societal discourses and ideologies regarding legitimacy and deviancy; the evolution of particular sexual identities and communities; and the body and how it is experienced and conceptualised in relation to sexual practises, referred to here as the sexual body. Studying sexual datafication draws on perspectives central to critical data studies such as feminist and postcolonial data studies (boyd and Crawford 2012; D'Ignazio and Klein 2020a; Dubrofsky and Magnet 2015; Noble 2018; Meyers West 2020; Saka 2021; Boyd, Levy, and Marwick 2014; Gates 2011), data

capitalism (Milner and Traub 2021; Segura and Waisbord 2019) and data justice (Dencik et al 2019; Dencik, Hintz and Cable 2019; Taylor 2017). These critical perspectives are vital to analysing how contemporary forms of biopower acts on sexuality. Tenets of critical data studies urgently need to be applied to populations marginalised on the basis of sexuality, such as the critique of power relations involved in datafication processes, focusing on data about marginalised groups and the importance of contextualising and localising bit data (Cifor et al. 2019; D'Ignazio and Klein 2020b; Costanza-Chock 2020; Leurs 2017; Masters 2015; Welles 2014). Queering datafication also has a literal identitarian application to queer and trans sexualities. The regulation of sexuality is also profoundly material. It relates to orifices, fluids, childbirth etc. and the freighting of non-heteropatriarchal and non-white sexualities with an excessive materiality that creates renewed disciplinary imperatives. A focus on sexuality is therefore vital to foregrounding what is often obscured: the material basis of data's extraction and the materiality of its effects (Taylor 2017; Kennedy and Bates 2017; D'Ignazio and Klein 2020; Ajana 2019; Ajana 2020). Sexual bodies are crucial data bodies.

This special issue begins an exploration of the varied ways in which sexuality is brought into relation with datafication. Datafication describes: the production and gathering of big data; the means for gathering data, for example, through platforms or AI technology; its algorithmic parsing; and its commodification. Sexual datafication pertains to sex tech (Lynn 2007), broadly conceived, such as dating apps, sex tracking apps, smart sex toys and online pornography which gather data directly from sexual activities. Data is also generated by internet and social media use, with social media platforms becoming an important way in which sexual communities can grow as well as a means of surveillance and discipline. Data generated in these ways, and through geolocative software, AI surveillance, wearables etc., can be utilised in both public and private sectors in contexts such as sexual health, education, policing and welfare. Sexual datafication studies frames the varied contexts in which big data is utilised to monitor and regulate sexuality. It also frames the large scale datafication which takes place on an international scale in the fight for human rights related to sexual equality and justice. What Diana Richardson calls 'sexual rights' (Richardson 2000) include issues related to: child marriage; sexual assault; marital rape; child sex trafficking; and sexual and reproductive health.

These varied ways in which sexuality is brought into relation with data constitute an intensification of '[t]he analog antecendents' (Clarkson 2014: 36) of counting as a function of power, associated in particular with the eighteenth century 'age of statistical observation'

(Espeland and Stevens 2008: 417; see also Weller 2012: 60; Martin and Lynch 2009; Alonso and Starr 1986; Wernimont 2019; Herbst 1993; Magnet 2011; Crawford, Lingel and Karppi 2015, 483-4; Ruppert et al. 2017; Bowker and Star 1999). Both the inherently oppressive epistemological rationale of counting and the particular historicised contexts of its use have specific resonances for sexuality (Gleeson 2007; Greenberg 1984; Foucault 2020). The sexual body typifies the 'immeasurable excess' (Anderson 2012: 36) that power seeks to control and economise (Saunders 2020). It has been particularly vulnerable to the way enumerating and labelling produces norms, stable bodies and quantified differences (Igo 2008: 291; Seidman, 1996; Richardson 2016; Whitehead 1995; Bryder 1998; Smith 1976; Wright 2007). Sexual datafication lies on a continuum with the historical role of numbers as mediator between power and sexuality. However, the capacities and scale of digital datafication and dataveillance renders data a new frontier of the biopolitical relationship between sexuality and power. Data constitutes an important moment in the history of sexuality.

The following section briefly summarises three biopolitical relationships between sexuality and datafication, though there are multiple overlaps between the cultural, economic, governmental, humanitarian and technological ways in which sexuality and data are brought together.

Data Cultures and Soft Biopower

In the Global North in particular, sex tech interpolates datafication into sexual subjectivity and establishes it as a normative conduit for relationships (Saunders 2022; Saunders 2023; Keilty 2017). Aspects of 'data cultures' – knowability, objectivity, hierarchies and control (Albury et al. 2017; see also Mau 2019; Vormbusch 2011; Porter 1996; Acker and Clement 2019; Hastie et al., 2009: 28; Law 2009: 242; Webber, Butler and Phillips 2015: 4; Mackenzie 2015; Chun 2017: 40; Striphas 2015; Swann 2013) – are key to understanding the dominant cultural symbols and moral values that characterise twenty-first century sexual culture. The moral imperative of control remains central to sexuality but in place of its historical punitive and reproductive rationale (Foucault 2020; Dabhiowala 2012; Laquer 2003), datafication produces a new sexual morality: one focused on highly individualised, technologised and consumptive control over sexual subjectivity and relationships.

The inherent heteronormativity of datafication (Saunders 2020) is also highly relevant to the virtual architecture and 'algorithmic culture' (Striphas 2015: 396) of platforms and apps which are built by and subsist on data. Platforms and apps founded on binary and hierarchical epistemologies of data constitute new types of heteronormative infrastructure that stand in interesting opposition to contemporary progressive sexual movements that champion the ambiguity and fluidity of sexualities. Ruberg and Ruelos write, for example, of the 'friction between LGBTQ lives and data' that 'challenge us to reconsider the logics of data itself.' (Ruberg and Ruelos 2020: 2-3; see also Browne and Nash 2010; Gieseking 2018; Rault 2017; Pape et al. 2020, 12; Drabinkski 2013: 96; Bhatia 2020). A cultural embeddedness in data cultures and infrastructures constitutes a 'soft biopower' (Cheney-Lippold 2011: 172), where datafication significantly influences sexuality through pleasurable and chosen recreational activities.

Data Capitalism and State Power

Sexual datafication studies is also interested in exploring the ways that the relationship between state and sexual subject finds new forms as big data is increasingly utilised in policy-making, welfare, policing, medicine and education (Sharon 2018; Sharon 2016; Thrift 2005; Andrejevic, Hearn and Kennedy 2015; Bossewitch and Sinnreich 2013; Dattani 2019; Sangaramoorthy and Benton 2012). Large scale datafication is used to address health care inequities (Cruz 2020) and to better understand the lived realities of particular sexual identities.[1] However, critical data studies notes the privatisation of datafication. Large-scale data gathering and management is now largely undertaken by Google, Amazon, Meta, Apple, IBM and Microsoft. This blending of private tech and state dataveillance is important to understanding new continuities and tensions in how capitalist and state forms of power operate on sexuality.

The expanded possibilities for dataveillance (Van Dijck 2014) can provide government bodies with greater means of monitoring and disciplining groups whose marginalisation is based in their sexuality. In the United States, for example, data gathered

[1] See for example, the LGBTI survey conducted by the EU Agency for Fundamental Rights in 2019, which gathered evidence on people's experience of discrimination and violence in employment, education, housing etc.

from women's purchase history, geolocative tracking and social media use can be released to federal and state law enforcement agencies in relation to women seeking now-illegal abortions (Chin 2022; Tian et al. 2021). In China, the suppression of 'male effeminacy' (Griffiths 2019) in Chinese culture is enacted partly through the monitoring and censorship of social media platforms. Douyin, WeChat and Sina Weibo have repeatedly been forced to undertake ' 'cleanup' effort[s]' (Hernández and Mou 2018; see also Ng 2014; Timmins 2021; Yineng 2022; Kenyon 2020; Caini 2022; Mozur 2022; China Daily 2016) to ensure their content aligns with the sexual conservatism of 'Xi Jinping Thought' (Xu and Albert 2017). The capacity to rapidly bring together large data sets can also interpolate sexuality into heteropatriarchal state institutions in new ways. David Spade describes, for example, the way trans citizens encounter immigration, welfare, policing and employment problems because of their 'inconsistent administrative identity' (Spade 2015: 339). The data economy and privatised dataveillance can therefore work in tandem with reactionary, religious and nationalistic interests of states to regulate and oppress particular groups on the basis of their sexuality.

However, sexual datafication also demonstrates how the needs of the data economy can operate in opposition to heteropatriarchal state institutions. The value of the sexual body now lies significantly in its central role within data capitalism, in the billion dollar industries of dating apps and online pornography, for example, (Criddle 2022; Cookney 2019) and in its significance to social media platforms and app ecosystems that are built and sustained through the data of relationality and affective intensity (Dean 2009; Hillis, Paasonen and Petit 2015; Clough 2010; Grosser 2019). The demands of data capitalism can serve the growth of marginalised sexualities and their visibility in public discourse. The value of sexuality through datafication can encourage forms of sexual sociality that operate in opposition to sexual norms of chastity, marriage, monogamy and heteronormativity, as research regarding the impact of dating apps on sexual culture demonstrates (Choi 2016; Ruscher 2019; Castro and Barrada 2020).

The attenuation of state power in the face of the economic and cultural heft of tech conglomerates and the digital cultures they support means the sexual cultures which evolve online are powerful and pose clear problems for states seeking to oppress and control citizens on the basis of their sexuality. Sexual datafication studies, in framing the very different contexts in which sexuality is managed through and transformed into data, highlights the

tension that plays out on bodies in the now often oppositional biopolitical interests of state and capital.

Data Colonialism

Biopower and colonialism are inherently connected enterprises. Sexuality is historically central to both. Justifications for European and Christian colonial expansion relied significantly on the construction of sexualities in African and Asian countries as variously other, dangerous, excessive and uncivilised (Said; Fanon; Aniekwu 2006; Tamale 2011; Nyanzi 2014). Now, data is significant in neo-colonial power relations, with 'data colonialism' (Couldry and Mejias 2019; Milan and Treré 2019; Stevens et al. 2021; Hoffman 2019; Raval 2019) describing the expansion of corporate datafication in the Global South. Fighting for sexual rights are an important part of the rhetorical justification for this datafication. Organisations and initiatives such as the UN's Data2x, the Harvard Humanitarian Initiative's Data-Pop Alliance and Mexico's Global Centre of Excellence for Gender Statistics consider gathering data about women and children's experiences related to sexual violence, health, education etc. as crucial to securing their sexual rights.

The necessity of data for social justice is well-established in critical data studies (d'Ignazio and Klein 2020; Caswell and Cifor 2016; Vaitla 2017; Kshetri 2014; Ruppert, Isin and Bigo 2017: 1; Heeks and Renken, 2016; Letouzé 2019; Letouzé and Pentland 2018). Taylor Cruz writes of 'data-driven equity' (Cruz 2020: 1) and Beth Coleman describes data as 'witness and action' (Coleman 2018: 391; see also Adams 2016: 9; Rohy 2010: 354; Rawson 2014: 25; Angell, Robert and Rawson 2014; Eisfeld 2014: 107). Data brings visibility to issues of sexual injustice.

However, this aspect of what the World Economic Forum terms 'data philanthropy' (Big Data, Big Impact 2012: 6) also needs to be analysed with regard to the powerful rhetorical role it plays in establishing the infrastructures and ideologies of datafication in the Global South that are vital to 'high-tech global capitalism' (Hoffman 2020: 11; see also Taylor and Broeders 2015: 229; Stark and Hoffman 2019; Gürses et al. 2016; Browne 2015; Payal 2016; Yeshi; Ahmed et al. 2017; Ekstrand et al. 2018; Ramirez et al. 2014). Datafication is constructed as a benevolent and civilizing force (Addo 2017; Milan and Treré 2019: 323; Amrute and Murillo 2020: 7; Bidwell 2016; Philip and Irani 2018) and wielded by Western democracies and organisations like the ICT Global Agenda and Corporate Human Rights Benchmark. Producing data is uncritically celebrated as a seductively simple and

technologically-advanced solution to the complexity of the patriarchal, capitalist and colonial systems in which sexual inequality is embedded (Stevens, Hoffman and Florin 2021; Mosco 2014: 320; Taylor 2020). The concept of data colonialism is important for interrogating how sexualities on the margins of digital Empire can be pathologized and the complexities of sexualities across multiple regions and cultures obscured (Hellerstein et al. 2017; Albright and Levine 2015; Zora Kovacic 2018: 1041; Mustafa 2017; Neff et al 2017: 88; Boyd and Marwick 2014; Lepri et al. 2018; Gitelman and Jackson 2013: 2; Zuberi, 2001; Ramirez et al. 2014; Kaplan et al., 2017; Hoffman 2020; Caswell and Cifor 2016). The role of datafication on the contemporary construction of sexualities in the Global South is significantly under-researched. Humanitarian and philanthropic types of sexual datafication assert the importance of data and concepts of data colonialism and justice to understanding the biopolitical impact of neo-colonialism on sexual cultures globally.

Conclusion

Sexual datafication studies frames the varied contexts in which power inscribes on the sexual body through data. The following articles show the interdisciplinarity of sexual datafication studies, spanning disciplines such as cultural studies, digital media and platform studies, political economy, (digital) sociology and gender and sexuality studies. These articles explore the role of data in forging new relationships between state institutions and the individual, in constructions of national identities and in political issues of sexual rights. Oscar Tianyang Zhou and Shuaishuai Wang analyse how the algorithmic management of social media data provides a new visibility of gay culture in China on the Douyin and Zhihu platforms. David Myles relatedly considers the implications for queer citizens in China of both the commodification and censorship of queer hook up Grindr. Darra Hofman and Michele Villagran explore the relationship between LGBTQ+ communities and dataveillance in the context of the Covid-19 pandemic. These articles explore how sexual cultures and sexual identities are shaped through datafication, as well as how the interests of data capitalism and those of the state are in tension with regard to policing non-heteronormative sexualities. The ‘soft biopolitics’ of sexual datafication is explored in Alberto Cossu and Carolina Bandinelli’s article on the evolution of reputational metrics in dating app culture. Cosimo Marco Scarcelli explores the rise of sex tracking apps and their biomedical, sexual and cultural implications in

their article ‘The datafication of sex: sex tracking apps and big data collection.’ Finally, Natalie Hammond and Angelo Moretti’s article focuses on the rise of big data in addressing sexual and reproductive health in the UN Sustainable Development Goals, and consider the challenges related to gathering sexual data in the Global South. These articles demonstrate that data is key to understanding the ways sexuality is shaped, disciplined and economised in the twenty-first century.

Sexuality is at the heart of some of the most pressing human rights issues of our time, which big data is often being called upon to solve. Sexual datafication studies asserts that data is vital to understanding the evolution of the biopolitics of sexuality, and that sexuality must be located within critical data studies.

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