

The Innovation Imperative in Global Health

Gendered Futurity in the Sayana® Press

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Abstract

In this Position Piece, we explore the hegemony of innovation and the construction of gendered futures in global health through the Sayana® Press, a device that delivers a version of the contraceptive drug commonly known as Depo-Provera. The device has generated tremendous enthusiasm amongst global family planning advocates for its effectiveness and ease of use, including administration by community level providers and self-injection. Claims about its potential are compelling: advocates hope it will dramatically increase access to contraceptives, and thereby unlock the social and material emancipatory promise of family planning. We offer preliminary observations about Sayana Press as an ethnographic and discursive object and further the scholarly conversation on humanitarian design by considering the gendered dimensions of global health technologies. The advent of Sayana Press reflects several significant trends in global health including the intensification of the innovation imperative and the bypassing of investments in infrastructure—both bolstered by the recent rise of the ‘self-care agenda’. Further, we suggest that global health technologies are also techniques in the Foucauldian sense—scripting new subjectivities and bodily norms towards gendered futurities. Finally, we note the dual role of the state in sexual and reproductive health as both source and object of reproductive governance.

Keywords

Global health innovation, Futurity, Sayana® Press, Sexual and reproductive health and rights, Self-care, Long-acting reversible contraceptives (LARC)

Introduction

Sayana® Press is a novel device, an easy-to-use gadget that delivers an injectable contraceptive lasting three months. The contraceptive drug, subcutaneous depot medroxyprogesterone acetate, or DMPA-SC for short, is a second-generation version of Depo-Provera. Sayana Press contains this lower-dose formula of Depo-Provera in an all-in-one device called Uniject, which packages a pre-measured dose of the drug together with a needle. Unlike Depo-Provera, which requires a sub-muscular injection given by trained medical personnel, Sayana Press has a short, thin needle for injection just under the skin. Sayana Press was designed by PATH, a global health non-profit based in Seattle, WA, US, and its collaborators to be easy to use. The device has been tested and approved for administration by para-health workers such as community birth attendants as well as for self-administration by women in their own homes. Sayana Press is now available in 40 countries, including many in the European Union and 15 in the global south.

This small device has ignited the imaginations of a variety of stakeholders in global health, most of whom work in the broad arena of sexual and reproductive health and rights. PATH pitches Sayana Press as ‘power in her hands’, aligning the device with the women’s health movement and feminist efforts to increase women’s bodily autonomy through increased access to biomedicine and the decentring of professional authority over contraception. The device has been a cornerstone of the largest reproductive health initiative of the 21st century: ‘Family Planning 2020’, a consortium of UN and bilateral agencies, philanthropic foundations, civil society groups, and the private sector in a self-described ‘global partnership to empower women and girls by investing in rights-based family planning’.¹ Global health professionals argue that Sayana Press can help countries meet their FP 2020 goals (Gribble 2017). The World Health Organization (WHO) asserts that self-injection of Sayana Press may contribute to equitable access to injectable contraceptives, particularly in areas with clinician shortages (WHO 2020). Family planning researchers suggest that Sayana Press might facilitate contraceptive continuation (Burke et al. 2018), circumvent patriarchal resistance to family planning (McNeish 2017), reduce maternal mortality, and help release women’s labour to the public sector to catalyse economic growth. How could one small device promise so much to so many?

1 See Family Planning (FP) 2020’s website: <https://www.familyplanning2020.org/>.

These hopes rest in Sayana Press as the first opportunity to self-administer a long-acting reversible contraceptive (LARC)—a breakthrough that has been decades in the making. Reproductive health experts note that Sayana Press is easy to use, discrete (after injection the user disposes of the device), and undetectable once administered, features that help overcome challenges to the uptake and continuation of modern contraceptives, which are long-standing obstacles in the population and family planning arena. Contraceptives, because they allow for birth spacing and can prevent unsafe abortions, are also essential to global efforts to combat maternal mortality (Suh 2021). Sayana Press's promises to increase women's self-determination operates at the scale of bodily autonomy but also economically, freeing women from reproductive labour to pursue remunerated work.

These aspirations for Sayana Press are compelling to us as feminist anthropologists, but they also invite critical engagement. Sayana Press's design and the accompanying rhetoric conjure the possibility of a more equitable and feminist future, but what else might the device signify? What else does it do, and for whom? In this Position Piece we interrogate how Sayana Press is mobilised as a means to achieve autonomy, empowerment, and self-actualisation for users in the global south. Our point of departure is a commitment to reproductive justice—the assertion that all people have the right to have children, not to have children, and to parent the children they have in safe and sustainable communities—and a recognition that population programmes have historically attempted to limit the reproduction of people of colour (Hartmann 1984; Roberts 1999). Reproductive justice is an intersectional framework created by African American women that is distinct from the homogenising and universalising second wave feminist frameworks (Mohanty 1988; Ross and Solinger 2017). We write as white feminist scholars from the global north seeking to challenge universalising rhetoric in global health discourse that champions a particular notion of 'empowerment' for women that is deeply neoliberal and rooted in colonial histories.

Our scepticism about Sayana Press stems in part from the contentious history and present-day controversies around Depo-Provera. It is associated with troubling legacies of population control campaigns, lack of informed consent, serious adverse side effects, and coercion in family planning counselling (Green 2017). African feminists have been vocal in their opposition to Depo-Provera. In an open letter to the WHO about a controversial clinical trial looking into links between Depo-Provera use and susceptibility to HIV infection, a consortium of feminists, scholars, and activists argued that the WHO cares more about reducing fertility than protecting African women from HIV infection (Raphael et al. 2019; Sathyamala 2019).

Against this backdrop we offer two interventions that might frame future anthropological research and practice and contribute to a critical 'network dialogue' around global health technologies (Richardson 2020). First, we suggest that analyses of global health technologies should engage with long-standing feminist concerns about the safety of drugs and devices and how they stem from and become tools of reproductive governance (Morgan and Roberts 2012; Takeshita 2011). Second, we draw attention to the critical intersection of gender and race in the anthropology of global health technologies. We suggest that global health technologies are also techniques in the Foucauldian sense (1980), and that the Sayana Press is scripting particular subjectivities, modes of self-governance, and new life aspirations for its users, which we describe as gendered futurities. These futures are in principle desirable and available to all, but are envisioned primarily for women of colour in the global south.

The imperative to innovate in global health

Sayana Press is not alone as an innovative global health technology. The 'innovation movement' (Scott-Smith 2016) has given rise to an array of point-of-use drugs and devices, including rapid diagnostic tests for infectious diseases ('a lab in a chip'); personal monitoring devices for chronic illnesses; mHealth apps; hand-held imaging technology; new clinical protocols; and tech-enabled care such as telemedicine and data collection tools. Actors like the Bill & Melinda Gates Foundation promote technological interventions to tackle a broad range of reproductive events and processes, from the clinical management of pregnancy and birth, to safe abortion, post-abortion care, and cervical screening. New gadgets, drugs, and protocols are hailed as innovations (even therapeutic revolutions) that offer simple, high-impact, and inexpensive solutions to long-standing global health challenges.

A small but robust literature in anthropology has been tracking the rise of global health technologies, their development, regulation, and implementation in the field, the networks of actors involved, and the politics and humanitarian logics which shape them (Collier et al. 2017; Duclos et al 2017; MacDonald 2020; Moyer 2014; Redfield 2012, 2016; Redfield and Robins 2016; Scott-Smith 2013, 2016). Peter Redfield coined the concept of humanitarian design to designate the creation of objects (referred to as 'life technologies') that address basic needs and save lives in the context of crises and in the absence of infrastructure (2019). Tom Scott-Smith describes the obsessive pursuit of novelty and 'optimistic faith in technology' as a dominant mode in global health (2016, 2230). For Scott-Smith, the 'innovation movement' is rooted in creative individualism and faith in the market's potential to solve humanitarian problems. According to the logic of the innovation movement,

basic needs that are unmet by governments require breakthrough products delivered into the hands of consumers.

A key insight of this literature is that global health technologies reveal pessimism about the state's ability to meet citizens' needs. As Redfield argues, 'In their very design, these objects reflect doubts about state capacity to safeguard populations. Rather, they are distinctly humanitarian goods, presenting themselves as an ethical response to failure on the part of states—and sometimes of markets and forms of civil society as well' (2012, 158). As the locus of care and responsibility to care shifts to development actors and markets, the state's role in sustaining life diminishes. As such, life technologies provide hope in the absence of functioning states, but leave users with a 'second best world' in which innovation stands in for care (Redfield 2012).

Building on these insights, we suggest that innovation in global health is more than a movement; it has become an imperative. Innovation inspires investment and the formation of public–private partnerships (another imperative in the global health landscape); it mobilises political will in part because it allows governments and private corporations to claim victory over the alleviation of social and material suffering in ways that affirm the moral and material logic of capitalism. Enthusiasm for innovation has been accompanied by ambitious, metric-oriented goals to galvanise the global health community around shared goals: zero new HIV infections, 120 million new users of family planning, and zero hunger, for example—goals whose achievement is positioned as requiring new technologies.

Innovative global health technologies are often designed to stand alone and be scaled up without apparent need for infrastructure. They promise to take biomedical technology outside the clinic and away from expert control in a process that has been called 'domestication' (Childerhose and MacDonald 2013); and, in the case of pharmaceuticals, 'diversion' (Lovell 2006, 156). Global health policies have kept pace. The concept of 'task-shifting' introduced by the WHO (2008), for example, recommends that lower-level health providers be authorised to use drugs and devices and manage health events that were formerly within the scope of highly skilled providers. The WHO 'self-care' agenda for sexual and reproductive health and rights similarly aims to increase accessibility to health technologies via the decentring of the health facility and the professional health provider as well as the devolving of more authority to community-level providers and to women themselves (WHO 2019).

Sayana Press and the innovation imperative

Sayana Press neatly illustrates several insights from the anthropological literature on global health technologies. First, it circumvents state investments in health

infrastructure and skilled personnel. It can be delivered by para-professional medical staff or by users themselves in the privacy of their own homes after an initial training. The developers of Sayana Press aptly convey the innovation imperative in their declaration that ‘innovation ensures that health is within reach for everyone’ and their aim to ‘accelerate innovation to save lives’ (PATH 2015). There is nothing new about contraceptives being positioned as the technological fix for a range of planetary ills from averting ‘the population bomb’ to solving the problem of underdevelopment through women’s entry into productive, rather than reproductive, roles. Yet, unlike provider-controlled methods of the past, the innovation of Sayana Press is said to lie in the fact that it is designed to be in the hands of its (implicitly female) users; decoupled from formal biomedical spaces and shielded from male surveillance, it becomes an act of empowerment and self-care: a feminist technology (see Layne et al. 2010).

In this new second-best world, state retreat has facilitated the emergence of empowerment via commercial products and gadgets. Individual users of drugs and devices govern their own lives and futures through direct access to biomedical commodities. The relationship between citizen and state has been truncated by multi-layered partnerships in global health whereby advocacy communities, and UN and bilateral agencies partner with private corporations to pursue their goals. The development, testing, and dissemination of Sayana Press, for example, required collaboration between Upjohn pharmaceutical company (which became Pharmacia and Upjohn, before being purchased by Pfizer), PATH, the US Agency for International Development (USAID), the Bill & Melinda Gates Foundation, the United Nations Population Fund (UNFPA), and the UK’s Department for International Development (DFID; now the Foreign, Commonwealth & Development Office).

The device seems to offer a shortcut to bodily autonomy and self-determination by means of an attractive, discrete, and empowering user-controlled contraceptive. These are unquestionably positive ends, but what is being bypassed, and for whom? A comprehensive mix of contraceptive options for women of colour in resource-constrained health systems? Access to skilled medical personnel and follow-up care? Complete information on safety and efficacy? Sayana Press may signal a new permanent state of affairs in which patented commodities do the work of caring for citizens while private corporations and philanthropic foundations push the state and its patriarchal modus operandi to the side as a *barrier* to healthcare. When such shortcuts come at the expense of a robust healthcare system, they may be disempowering and even dangerous. What, then, do we make of the feminist rhetoric and claims for this device?

To date there are no ethnographic accounts of user experiences with Sayana Press; claims about its desirability reflect its positioning by global health actors. Promotional materials for the device from PATH, USAID, UNFPA, and the FP2020 initiative convey a persuasive admixture of feminist notions of bodily autonomy and access to reproductive healthcare for women, combined with market logics of individual consumption and profit-making in the circulation of commodities. The potential of Sayana Press derives not only from the biochemical effects of the drug and point-of-use protocol, but from how it is packaged rhetorically as a leap forward for female empowerment.

From coercion to empowerment? Depo-Provera, LARC, and Sayana Press

The advent of Sayana Press as a ‘game changer’ in the arena of global health technologies is the latest chapter in Depo-Provera’s complicated history, which includes coercive human testing and a contested 25-year-long US Food and Drug Administration (FDA) approval process (Green 2017). Although Depo-Provera was not approved by the FDA until 1992, it was distributed to women in over 80 countries (mainly in the global south) throughout the 1980s, typically as part of top-down population control programmes. From its debut, the drug met with global resistance from feminists and health activists who questioned its safety and stressed its numerous adverse side effects—including prolonged and irregular bleeding, suppression of immune response, and loss of bone mineral density (Callaci 2018; Lambert 2020).

These concerns about Depo-Provera have been notably lacking in the fanfare surrounding Sayana Press. The device was launched with little discussion of safety and an absence of any acknowledgement of the historical connection between Depo-Provera and population control, or concerns about Depo-Provera and HIV acquisition. In the field of global family planning and reproductive health, long-acting reversible contraceptives (LARC) are valued for being cost-effective, reliable, and highly effective, and they are praised for their ability to eliminate user error. LARC have often been seen as especially appropriate for poor and minoritised women in the global north and the global south with limited access to healthcare because they eliminate the need for contraceptive users to take daily actions or to attend clinics regularly. Reproductive justice scholars and activists have challenged the promotion of LARC in the US, particularly among poor, young women of colour (Gomez et al. 2014; Gomez and Wapman 2017). Feminist scholars argue that enthusiasm for LARC is a resurgence of population control, and they critique the re-packaging of constrained choices in contraceptives as empowerment (Bendix et al. 2020). In Sayana Press we see a controversial contraceptive with a sticky history reborn as an innovative breakthrough. But where

is the concern with safety—both at the point of use and in the safety that a functioning health system provides? What sort of empowerment and autonomy does it enable?

Global health technologies are global health techniques

Sayana Press offers a compelling entry point into the charged sites of biopolitics and governance where humanitarian technologies are imagined and introduced. It responds to real human need but is also implicated in the long history of the biopolitical management of reproduction that has been central to the projects of colonialism, nation building, and international development (Hartmann 1997; MacDonald 2019; Morgan 2019; Murphy 2017; Sasser 2018; Takeshita 2011). These biopolitical interventions have varied over time and space, from the prevention of infant and maternal deaths amid fears of a depleted labour pool, to the curtailing of ‘excessive fertility’ amidst neo-Malthusian and racist fears of overpopulation.

Sayana Press is more than a neutral technology that prevents pregnancy through a chemical disruption of ovulation. By its very design, it has complex social and material intentions. This tiny device aspires to change the world one subdermal injection at a time. The innovation lies not only in the biochemical effects of the drug combined with the Uniject device but also with its clinical protocol permitting self-injection. Sayana Press is a technique in a project of self-making and as such is a form of reproductive governance (Foucault 1980; Morgan and Roberts 2012; Morgan 2019) that works through the body, cultivating new norms and desires for its care, its conduct, its consumption habits, its modes of planning, and its reproductive restraint. Sayana Press enables this biopolitical work by framing the use of contraception as empowerment and by designating low fertility, birth spacing, and planned families as markers of modernity. Further, countries in the global south are themselves subject to reproductive governance via global campaigns to achieve reproductive health benchmarks such as reduced fertility rates and reductions in maternal and infant mortality (Suh 2021). In this way, states targeted by global family planning campaigns might also be considered ‘users’ of Sayana Press and other LARC methods that help them fulfil their population promises.

When we approach an understanding of global health innovations as both technologies and techniques, their users and the scripts they are supposed to follow remain visible: take your medicine when reminded by an SMS; self-inject a dose of contraceptive at 12-week intervals; follow the prompts on a telemedicine app to diagnose a prenatal condition. Thus we are reminded that global health and life technologies do more than interact disinterestedly with bodies; they propose

and cultivate new subjectivities, alter projects of self-making and modes of consumption, and even create new biosocial groups. As scholars of technoscience and medicine have remarked, pharmaceuticals (and, we would argue, technologies) are called upon to transform and manage bodies, to bring them in line with changing social and material aspirations and expectations (Hardon and Sanabria 2017; Oudshoorn 1994; Sanabria 2016; Whyte, van der Geest, and Hardon 2002).

While other life technologies aim to protect life, Sayana Press promises to do much more, to enhance life, and make the future desirable, particularly for women in the global south. Its claims about empowerment are part of the fix. While the gendered nature of technologies may be less evident in devices such as the LifeStraw (a handheld high-capacity water purifier), ready-to-use therapeutic foods like Plumpy'nut, or portable medical technologies like rapid point-of-care diagnostic devices, they too mobilise particular aspirations for gendered subjects. Vaccines, for example, generate scripts of responsible motherhood as women carry children to clinics and hold them as they receive their injections or drops. LifeStraws and devices that increase access to clean water implicitly address the labour demands of women and girls who procure water for drinking, cooking, and bathing. The overtly gendered aims of Sayana Press invites a deeper analysis of the gendered implications of other life technologies as a timely corrective; to date attention to gender and race have been largely absent from accounts of global health technologies, with the exception of work on contraceptives (see Brunson 2020; Senderowicz 2019).

Sayana[®] Press and gendered futurities

The excitement about Sayana Press in global health derives not only from what it can do in the present, but from ideas about its ability to produce desirable futures. This small device and its point-of-use/self-care protocol is a future-oriented technology that promises enticing outcomes for women who use it and for society at large (Spieler 2014). In spite of regulatory approval for use in the global north, Sayana Press represents 'appropriate technology' to solve the problems of particular kinds of potential users: women of colour in the global south with limited access to health infrastructure. Sayana Press illuminates the present moment and the gendered futures being pursued in global health and development: choice and access to healthcare for women; greater bodily autonomy for users; achieved and averted births in poor countries; reductions in global fertility rates; reductions in maternal and infant deaths; and more equitable gender relations.

Beyond individual and collective reproductive autonomy, the promise of Sayana Press is also one of expanded contraceptive markets and profits, and the releasing

of women's labour to catalyse economic growth in low-income countries through the demographic dividend (economic growth that may result from a decline in birth and death rates and the subsequent change in the age structure of a national population). In this future, women are self-actualising consumers, not targets, and the story of population control and development is reframed as a desirable feminist one. Yet without challenging steep gradients of global inequality along lines of gender, race, and geography, Sayana® Press's potential to achieve reproductive justice is limited.

There is no doubt that global health technologies make life-saving interventions in humanitarian emergencies and can contribute to the delivery of high-quality and accessible healthcare in everyday settings. Yet, we must also recognise the new issues they raise about safety, the healthcare gaps they can never truly fill, and the biopolitical work they do as techniques of the body entangled in market-driven efforts to enhance and improve life that emphasise narrow, homogenising scripts for women's empowerment, particularly in the global south. To this end, our goal in this Position Piece has been to keep a cautious and critical feminist eye on how global health technologies are packaged and deployed and what we, as anthropologists, make of them.

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