



The Last Farewell, 2014. Jogjakarta, Indonesia.
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About the photograph

Ibu Maryani founded the Pondok Pesantren Khusus Waria Senin-Kamis. (S)he was an important figure in the LGTB movement of Jogjakarta, known nation-wide for her kindness and efforts to support and promote the integration of waria within Indonesian society. (S)he was considered wealthy among other waria, and they would often receive from her money, protection, shelter and employment. Her death, after several months of sickness, shocked waria and the LGBT community. At her funeral, depicted here, more than 250 people, including waria, Ibu Maryani's relatives, NGO staff, LGBT activists, journalists, neighbors, and other people turned out to pay their respects, cramming into the narrow street where Ibu Maryani lived. The farewell was visceral, her mourners wailing the loss of such an influential leader and loved friend.

—Nestor Nuño

Sexuality and Technology

*Anita Hardon, Lenore Manderson
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'Gender' and 'sexuality' are elusive terms, commonly used as if self-evident yet as problematic in their definitions as in their politics. The simplest distinctions are between sex and gender, in order to differentiate biology and social and behavioral traits, but these distinctions are not made and do not make sense in all cultures (Rubin 1975); anthropologists studying sexuality, as well as queer theorists and activists, have made the insensitivity of this demarcation clear (Jackson 2011). 'Gender' references broader configurations of social life, encompassing ideologies and practices of kinship; sex, in contrast, is generally seen to be a biological classification of living things as male or female according to their external and internal genitalia, their chromosomes, endocrine systems and reproductive organs (Karkazis 2008; Wizemann and Pardue 2001). But as controversies illustrate, such as that over the gold medal for the 800-meter race of the South African woman, Caster Semenya, definitions of male and female are not straightforward. Semenya was found to have an intersex condition, leaving her with no uterus or ovaries and high levels of androgens. Defining one's sex is complex—there is not one biological marker that allows for a simple categorization of people as male or female. Moreover, gendered life experiences impact endocrinological processes, and thereby affect biologically defined sex differences between men and women (Karkazis 2008).

Together sex/gender as an intertwined concept contributes to the meanings given to sexuality, and to how it is understood in social, political, and cultural life. 'Sexuality' can refer to sexual feelings, sexual desire, and pleasure; to identity and its implications; and to social arenas where moral discourses on 'good' sexual behavior are played out. In this chapter, we use the term 'sexuality' as a relational concept within a medical anthropological framework, and reflect on the ways that different strands of sexuality research, involving historians, sexologists, and queer and feminist scholars, have contributed to our understanding of these issues. We focus on how sexuality is affected by and how it shapes medical technologies. We approach sexual behavior not as a biologically determined drive, but as a socially and culturally constructed practice shaped by power relations (see, for example, Spronk 2009). Using four case studies, we show how sexuality has been shaped by access to medical technology, and how medical technologies can be experienced and analyzed as liberating and oppressive, reflecting and shaping cultural notions of appropriate sexual identities, practices, and gender roles.

Taming Non-normative Sexualities

In the late nineteenth and early twentieth centuries, in Europe and North America, medical researchers began to study variations in sexual behavior and desire, identifying people considered

'deviant' from the heterosexual norm of given times and places (Irvine 1990). Michel Foucault (1976) described how in the nineteenth century scientists started defining sex as something core to our identity, and so began to establish sexual standards and measure individuals and groups. Sexology as a discipline is conventionally traced to the publication of Krafft-Ebbing's book *Psychopathia Sexualis* (2011 [1886]), but this is simply a place marker in the development of the 'science' of sex in the Western academy.

Krafft-Ebbing's work built on and reflected popular interest in sexual difference and its embodiment throughout the nineteenth century (Foucault 1976; Roberts 2011). The story of Saartjie (Sarah) Baartman, born in 1879, is a particularly stark example of this early fascination with the embodiment of sexuality. Baartman, with at least one other Khoi woman, was taken from Cape Town, South Africa, to London in 1810, and then to Paris in 1814, and was paraded through the streets and displayed, examined, and ridiculed because of her large buttocks. Following her premature death in December 1815, she was dissected, and her skeleton and a body cast remained on display at the Muséum d'histoire naturelle d'Angers in France until 1974; her remains were returned for burial in South Africa only in 2002. Her treatment has been the subject of numerous scholarly articles, books, plays, and poems for many reasons, not only to expose ideas about sex and gender, bodies and sexuality, but also to illuminate slavery, racism and colonialism, stereotypes of race and sexuality (libido, desire, and so on), and the role of science in perpetrating racism (Gilman 1985; Willis 2010).

The interests of medical scientists and curious publics in Baartman's physicality were only part of the oppressive view about sexuality and bodies at the time. Historians of sexuality, in emphasizing the disciplining role of medical technology, have documented the recourse of surgeons in Europe and the United States to sexual surgeries to tame sexual desires and practices, such as masturbation, that did not conform to prevailing moralities on gender relations and sex. Sexual surgery like clitoridectomy continued until the 1940s in the United States to treat women's 'neuroses,' hysteria, and other behavior regarded as aberrant, even though at this same time other doctors were experimenting in stimulating sexual response (Kapsalis 1997; Maines 1999). In the United States, too, sexologists and other medical professionals used sex hormones to try to change the sexual desires and drives of men identified as homosexual, who were thought to have an excess of female hormones. Later in the mid-twentieth century, psychiatrists and other doctors started using electric shocks and lobotomy surgery with this aim. Not surprisingly, such pathologization of non-normative sexual identities and practices reinforced high levels of stigma, preventing people from openly expressing their sexual desires (Roberts 2011). At the same time, the sharpening of psychological interventions and the use of ways of measuring sexual desire contributed to the production of stereotypes about and laws targeting gay men and women, in contrast to the diversity that was permitted in certain other cultural settings. Reflecting this attitude, until 1974, homosexuality was considered to be a mental illness by the American Psychiatric Association, and this repressive regime had profound negative effects on the mental health of gay men, lesbians, and others whose sexualities were non-normative.

Celebrating Sexual Diversity in Queer Studies

In the 1970s and 1980s, gay and lesbian activists played a key role in challenging the pathologization of non-normative sexual identities in medicine. Stimulated by this activism, scholarship on sexuality and gender in humanities departments in the United States and Europe has revealed the heteronormativity underlying much of the earlier research and writing on sexuality, and fundamentally changed our ways of thinking about sexuality. Queer scholars urged us not to assume sexual identities in binary terms (masculine versus feminine), but instead to examine the plurality and fluidity of desire and identity. Women's studies, feminist studies, and gay, lesbian, and queer

studies have further critically recast theories that previously used reproduction to link gender and sexuality in order to explain women's subordination. Sexual and gender identities are not fixed, but draw on multiple axes of difference, style, sexual practice, and performance (Butler 1990). At the same time, anthropologists and other scholars have described the material aspects of sexual practice, so illustrating the ways in which local notions of desirability and various protocols, pharmaceuticals, surgeries, and personal practices affect how people present their bodies. Various chemicals, for instance, may be used to induce sexual desire in the global North (Race 2009); similarly, women in southern Africa use vaginal products to dry their vaginas, and stretch their labia to enhance pleasure (Hilber et al. 2010). In his ethnography of Brazilian *travesti*, Don Kulick (1998) described how his interlocutors, born biologically as men, adopted female clothes, names, and hairstyles, and used female hormones to achieve more female body forms, including growing breasts. His interlocutors, however, did not want to *be* women. They defined themselves as homosexuals, as men who desired men. They dressed as women to make themselves attractive to men, in response to local ideas of same-sex relations between men, independent of sexual identity.

In Southeast Asia, too, differences in gender, sexual identity, and same-sex desire are understood through a variety of categories that do not map neatly onto conventional biomedical classification systems. *Waria* in Indonesia, *bakla* in the Philippines, and *kathoei* in Thailand are all culturally structured categories of sexuality, which provide ways of dealing with people who might be categorized in the global North as gay, transgender, or intersex. Peter Jackson (1997; 2011) has described how sexual and gender difference is accommodated in Thailand, provided that there is conformity to the alternatives: as an effeminate man, a 'ladyboy' who identifies as female, or as a transvestite. Here, sexual identity is reinforced through practices such as dress style, habitus (speech, walk, gestures), and occupation; many people who identify as *kathoei* work in stereotypically female occupations. These Southeast Asian transgender/transsexual identities have been represented as premodern ritualized variants of contemporary sexual fluidity. More recent research emphasizes the differences between these forms of sexuality and identity and contemporary modes of being gay and queer that are consistent with ideas of sex and gender found in the global North (Jackson 2011).

In the first case study below, located in Thailand, we meet three young male-to-female transgender *kathoei*. Like *travesti*, *kathoei* use a wide variety of techniques to perform their desired gender identity, and in doing so, they relate to dominant notions of femininity, associated with conventions of beauty, such as having soft skin and breasts. *Kathoei* use hormonal pills and injections to grow breasts and otherwise feminize their bodies. Older *kathoei* are unsympathetic and warn the youth that they risk their health through such practices.

3.1 Feminizing the Body

Panoopat Poompruek, Pimpavun Boonmongkon and Thomas E. Guadamuz

At the Dok Mai Studio, a group of Thai *kathoei*, aspiring to live as women, meet regularly to inject hormones. Here, they provide each other with advice about various oral medications and injectables, and about managing negative side effects to achieve the desired results—breasts, glowing skin, femininity. They provide support too, as they seek to negotiate a life in Bangkok that is at the same time accepted and transgressive.

Sai's Story

Among the other Dok Mai Studio crowd members, Sai was the last to embark upon her journey of medicine taking. Some of her friends had taken medicines when she was in her fourth year of high school, and she had tried it herself, but she did not continue because an older student warned

her that if she took a lot, she would become confused, would not have a clue about her studies, and would not be able to pass university entrance exams. So, Sai first resisted the urge. The first kind she took was Diane, an oral contraceptive brand. An older friend told her it would make her beautiful and her skin would become white. She took one tablet per day, and it was effective—she got breasts:

My senior at school told me it'd make you pretty. Her skin was very white. So I bought and took Diane and my breasts grew. In the past, I was in a boys' school. So, when my breasts grew a bit, oh, it was a rage. I became interesting to the boys. And so I bought more, taking a pill a day. I just took them in any order, didn't follow the arrow on the pack or go against it. Just pressed them off the blister pack and took them.

Sai began to use medicine in earnest in her fifth year of high school. By this time, she was permitted to wear a *rong song* hairstyle (short in the back but longer on the top of the head) as she was now a senior in her school. The pills gave her headaches so badly she could not bear it anymore. A friend advised her to switch to another brand, Preme. Sai was in luck. She did not get side effects from this brand, and so she has used it ever since. But when she talked with some older kathoei students,¹ they told her that if she wanted to become more beautiful, she should take a combination of different medicines, like they did. Preme alone, they thought, was insufficient for becoming beautiful. So, she added another kind, Premarin. Her expectation was that by taking this second drug, her breasts would grow bigger. When two kinds of pills were insufficient for the job, Sai decided to add hormone injections to the mix. A clinic near her school provided Progynon injections for a promotion price. She had them once a month. The injections did help her breasts to grow, but she felt weak and devoid of energy. She herself called these side effects 'laziness symptoms.' Because of them, she could not prepare for her entrance exams. So Sai stopped taking these injections for a while, and just took her pills.

When She Hit It Hard

When Sai finished her final year of high school, her life had become freer—she did not continue her studies. She started working in a large cosmetics company, and there she could already dress as a woman. During this time, there was a shortage of Premarin on the market, so she could not take it any longer. Instead, she found so-called Lao birth control pills (*ya khum Lao*). She took these each day with Preme, combined with weekly injections of Progynon. She was able to reduce the side effects by adjusting the timing of intake, so ensuring that none affected her too much when she took them:

I'd mostly heard about these ways from others, and now I tried them out by myself. Preme, for example, I took three pills a day. I might split that into one in the morning and two in the evening, together with one Lao birth control pill. In other words, at the time when I was hitting it hard, I took them mostly in the evening, and so they would not have too much effect—I'd fall asleep and not feel anything. Because with these drugs, when one takes a lot of them. . . . I also felt at one point that when I went out to work, did makeup for the clients, if I faced really bright sunlight, I felt dizzy, didn't have much energy.

After working for a while, Sai increased her dosage again when she met her first boyfriend and felt it necessary to make her body as womanlike as possible: "To make me beautiful, to not make him feel embarrassed about having me as his girlfriend," Sai explained. She now took hormone injections, Proluton, twice a week, every Monday and Thursday. But Sai experienced numerous side effects, and after three months, she had to reduce her dosage:

It lasted some three months. During these three months it was like this, non-stop. My body really changed. My emotions changed so much that I felt like I was someone with violent mood swings, like someone who exploded with anger for no reason. And I ate so much. I was at my fattest at the time. At the time, I was some 53 kilos. I normally can eat whatever and not get fat, but during that time I ate so much. Phi Meng, I could eat over ten plates of rice in a day. Fifty-three kilos was a lot. I looked radiant, was fat, and had good skin. I was getting a lot of injections, had a new boyfriend, and worked as well. I felt that problems were circling me—my emotions were so violent and I spoke so arrogantly that my closest friend told me that if I didn't cut down on

my hormones, they would not want to come near me, because I'd complain and explode with anger just like that. I also had no sexual desire. I felt like, er, I was a woman and just wanted to do things related to beauty. Like this. But no sexual desire. My sexual organ didn't have any feeling—it was as good as dead.

Although Sai could not tolerate the side effects any longer, she did not stop taking hormones entirely, because she still wanted her body to appear feminine to her boyfriend. Instead, she cut down her hormone injections to once weekly or once every two weeks. She also reduced her doses of Preme and Premarin to one tablet of each per day. The Lao pills she stopped taking altogether. For four years, whenever she observed that her body looked less feminine, or her boyfriend mentioned it to her, she lost confidence and increased her dosage again, both oral and injected hormones, to her previous levels. When she had regained her self-confidence, she would slowly cut down her dosage.

Sai, Revisited

Sai's self-medication had a lot to do with having a boyfriend. She wanted him to feel that she was as much like a woman as possible. But he told her: "Sai, you've got to accept that in any case, you're not a woman." He was also unfaithful many times, and Sai finally decided to end the relationship. She moved out of Bangkok to "flee her love." Her new life constituted only work. Having lost her motivation, medicines no longer seemed necessary to her, and she stopped taking them. When she began to hang out with her friends in Bangkok again, however, she resumed taking hormones. This time, she did not take such heavy doses, but used the same brands as before—Preme and Premarin, one each per day. Sai surgically augmented her breasts and had to adjust her dosage once more, to fit with the changes in her body. She was now taking hormones to ensure she would not develop bulging muscles, and to take care of her skin. She took two pills of Progynova each day and half a tablet of Androcure every two days to control the production of male hormones, as she had not had sexual reassignment surgery.

Twins Nam Daeng and Som

Nam Daeng: I didn't know about it before I visited Corner, [a bar for] kathoedis who sell their cunt on Patpong. They were really in the top league of beauty. They said to me: "Why don't you take birth control pills? When I was kid, I wasn't as pretty as you. Go ahead, take them, in secret. If your mum does not let you take them, then hide it." They advised me that people usually took one pill a day. I wanted to be more beautiful, so I took a lot. Took a lot first and then slowly tapered it down, because this can increase your hormones. So I did take them secretly. When I first took them my spots disappeared. When I got spots again, I took them again. After a while, I had no muscles, and began to feel pretty. I began to get moody, my moustache wouldn't grow, and I had no spots. My moods were more feminine—whatever I did, I was so emotional. I didn't have much energy, but I was ever so moody. I didn't have energy but I had a fighter's heart.

Nam Daeng's and Som's medicine use began when they were 17 years old, but they did not start using hormones at the same time. Nam Daeng began first, because at the time she already felt confident enough to dress as a woman. Som, at the time, was still choosing between gay and kathoei identities because she was not quite sure if she would pass as a woman. She tried taking small doses of hormones from time to time, then stopped, because she had decided to be gay. Nam Daeng started with the oral contraceptive Diane, but it gave her migraines and she switched to another brand, Preme. In her first month of taking Preme, she took three pills a day—one in the morning, one at midday, and one in the evening. Based on advice she had acquired from the kathoedis at Corner—her role models in medicine taking—she later tapered down her use to one or two pills a day. She believed that by beginning with a strong dose, the effects of the medicine would stay with her longer. When she noticed the effects wearing off, she went back to taking heavier doses, and so on.

Hitting It Hard

When Som began to feel that her experiments with dressing as a woman were successful—people were complimenting her on her beauty and men had begun to take an interest in her—she abandoned her gay persona and started to dress as a woman full-time. What was needed though, were hormones, just as they had been for her sister Nam Daeng. Som began taking hormones five years later than Nam Daeng, at the age of 22, which kathoeis consider a late start. Som felt that she had to hurry her feminization, and she did so by taking large doses of hormones. She began with six tablets of the oral contraceptive Preme per day—three times per day, two tablets each time. Now Som and Nam Daeng were both experimenting with medicines—they tried whichever kind their friends said were effective, including the Lao birth control pills, which are considered the strongest available. But both had to discontinue these, as, while they made their breasts grow, they had heavy side effects:

Nam Daeng: The Lao birth control pills are bought from Burma, by the ten or by the dozen. Some come in from China, too. These are really weird, scary birth control pills. They say that women only take one a month, but kathoeis take one a day. I tried taking one a day. The first time I took them was with this kathoei on Silom (Road), who told me to take them because they'd be quite something, two tablets. I took them and became beautiful in an instant. After the first blister pack, oh, my breasts grew straight away. My breasts hurt. But I couldn't take the second blister pack because I puked really hard. But just that one pack made my breasts stand out. If something touched my breasts, they hurt so much. Oh, no. Like, they were really something. I put on a shirt and when the shirt touched my breasts they hurt really bad. They became real humps I could push up with a bra. If I did that, I looked like a *chani* (derogatory term for women) who's had kids, and the bra got soiled with, like, white, thick milk that came out of my breasts.

After the Laotian pills, the twins switched to injectable hormones twice a week. Then they added two tablets of Androcur per week to the mix to reduce their male hormones. They also took their previous dose of Preme. In combination, these medicines constituted what the twins considered their full option. But they also kept on trying new medicines, so eagerly that they became the ones to whom others would turn to if they wanted to know which medicines worked well. If the twins said a certain medicine worked, others would start taking it.

Nam Daeng and Som took many kinds of medicines and so had to take several tablets at a time, several times a day. This complicated their lives. Older kathoeis also told them: "Don't take too much, you'll ruin your kidneys." So both quit all hormones except the injectables, which impressed them because they were fast acting and convenient; they did not have to carry around pills every day. However, these injections could still be considered hitting it hard because they had them once weekly (or four times per month):

Som: We had so many injections. So many that Nam Daeng and I stopped taking pills altogether. At that time, we just got the injections. Like, if I got the injection today, next week I'd already start to feel something. But with pills, I think you can see results in two months' time, like in the second month. And though you've seen me complain, they're good. Better than pills.

Quitting Hormones

Having supercharged herself with hormones, both oral and injectable, for some two years, Som quit. She had tried to adapt the medication regimen many times, changing the dose or the timing, but to no avail. The side effects were numerous. She felt nauseated and vomited, but was willing to put up with these side effects for beauty's sake. But she also felt very weak and devoid of energy, because her muscles had shrunk. Both she and Nam Daeng had to work hard to earn money, and lack of energy made this difficult. In addition, she became depressed, then suicidal. She was lucky to have her mother warn her:

Som: When I was taking a lot of birth control pills or injections, I knew that I wasn't in my normal shape. Like, some people said that I'd cross the street without realizing it. Like I've told you,

I'm someone who likes to observe things. I knew that eight injections in two months was a lot for my body. There was a time I just sat still and wondered why I was feeling so terribly sad and empty . . . I began to realize that this was an effect of the drug. I warned myself about it. One day, I sat in front of a mirror, and suddenly, I was talking with the mirror, just sitting there, combing my hair, as if this was nothing out of the usual. But my mother asked me, 'child, are you all right?' My mother had seen me sitting there, talking to the mirror for a while, talking to myself, complaining about this and that—it's hard to explain, like saying 'I'm so fed up—why is my life so tedious?' to the point I wanted to kill myself, that bad. And that wasn't the only time or the first time . . . I realized that if I'd keep on taking a lot of birth control pills, or have my cunt done, and then kill myself, what would happen? I'd accumulated this for my entire life, just wanting to be beautiful. So, I chose to quit.

Som was not the only one to suffer from mood swings. It happened to everyone who used hormones—Nam Daeng, Sai, and their friends. Although they were not so badly affected, and hormones did not make them suicidal, it was not that much better, either:

Som: I asked a friend: 'What's wrong with you, sitting there, playing with that lipstick?' She said: 'My big sister gave it to me. I see this lipstick and I miss my sister.' So I asked her: 'These past three months, have you still been taking two in the morning, two at noon, and two in the evening?' She said yes, she had. So I said: 'It's high time for you to cut down to one a day.' Phi Meng, [she said] 'I got a haircut and didn't like it. Shave my head, if I'm not beautiful, shave it all off.' So when they didn't shave her hair, she cried. [So I said,] 'when you've finished shaving your head, go become a nun.' [But in a little while] she [started to] like [her hairdo] and cried again. Really scary, these birth control pills.

Like Som, Nam Daeng quit taking hormones because she did not have enough energy to work. She also had mood problems, but she said she could control these symptoms. Som found quitting the hormones difficult because she was depressed, but she persisted. Her *kathoei* friends were stunned: she had been a pioneer of hormone use and had more knowledge about hormones than anyone else in the group. Many of her friends tried to persuade her to restart, asking her: "Why did you quit? You wanna be a gay or what?" She replied: "I don't wanna die."

Note

1. Kathoei refers to sexually diverse people. See Jackson (2010) and Käng (2012).

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Taming Reproductive Women through Contraceptives

Contraceptive technologies can have both liberating and disempowering effects. Among *kathoei*, contraceptive hormones are used to achieve desired sexual identities; among heterosexual women in the West, beginning with the introduction of 'the pill' in the 1960s, they caused a sexual revolution. And, from the 1960s, population planners promoted contraception as an instrument to control fertility in the global South, as high rates of fertility were seen to be a threat to global food security and the environment.

In this context, sexuality studies were conducted both with a focus on family planning and within a health and development framework. Anthropologists were called on to study 'barriers' to contraceptive use in order to increase the uptake and sustained use of family planning methods

(Bledsoe et al. 1994; Hardon 1997; Richey 2008). While population planners expected that the low acceptance and uneven use of contraceptives were associated with people's lack of knowledge, anthropologists found that women strategically navigated their fertility (Bledsoe et al. 2000). Fertility is strongly valued in many societies; pregnancy proves fertility, and is thus cherished; women are valued by virtue of their fecundity; and infertility may be used as a reason for divorce or marriage to a second wife. Men may prohibit their wives from using contraception, but at the same time, anthropologists have found that women in many settings dislike contraceptive pills because of headaches, nausea, weight gain, and other perceived understandings of the technology and its effects—such as pills piling up in the uterus and causing cancer (Hardon 1997).

Rather than preventing pregnancy by taking a pill every day, women may resort to massage, herbs, or modern pharmaceuticals to induce menstruation when they fear that they are pregnant. Erica van der Sijpt (2013), in an intriguing study of reproductive behavior in East Cameroon, has documented how young women keep their pregnancy secret for as long as they can, while they try to catch a 'big fish' as the father-to-be. Only when women cannot negotiate a suitable father do they resort to herbs or pharmaceuticals to self-induce abortion, or seek the services of a traditional abortionist.

Towards a Broad Definition of Sexual Health

At the 1994 International Conference on Population and Development in Cairo held by the United Nations, in response to a decade of campaigning by women's health advocates on the violations of women's reproductive rights in family planning programs that emphasized population control, the global community committed itself to programs to ensure that men and women might enjoy safe sex lives. Reproductive and sexual health was defined in the conference's Programme of Action (section 7.2) as:

a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life. . . . It also includes sexual health, the purpose of which is the enhancement of life and personal relations, and not merely counselling and care related to reproduction and sexually transmitted diseases.

(ICPD [International Conference for Population and Development] 1994: 59)

The Programme of Action called for reproductive and sexual health programs that would empower women, and technologies that would provide them with protection against unwanted pregnancy and sexually transmitted diseases. The program signalled a radical change in global population policies. It acknowledged women's agency in fertility and sexuality, and granted individuals, including unmarried women (ignored in the United Nation's earlier population policy statements), the right to sexual health. As a result, the conference changed both international agencies and national family planning programs worldwide, as they started to redefine their aims in terms of reproductive health rather than population control. It also changed sexuality research in diverse sociocultural settings, with the goal of informing sexual health policies. While research in the 1980s was aimed at developing long-acting contraceptives to help reduce population, by the late 1990s, contraceptive development increasingly focused on reproductive choice (Hardon 2006).

Advocacy for female-controlled contraceptive methods also gained momentum after the Cairo conference. Studies supported by the Population Council pointed to the widespread

reluctance of men to use condoms; there was also a consistent message in studies of condom use in the context of HIV prevention (Manderson et al. 1997). Non-use partly again related to lack of knowledge and lack of access to condoms, but many studies also pointed to cultural barriers. Many qualitative studies had found that male condoms had a negative influence on sexual desire; as one study conducted in Uganda, using condoms was compared to eating sweets with the wrapping still on: they prevent the “real taste of sex” (Obbo 1995: 80). The non-use of condoms was also associated with trust; conversely, the use of condoms within a relationship implied lack of trust. Linked to this, in certain settings, condoms were associated with promiscuity and were thus considered inappropriate for use in stable relationships. Attempts to negotiate condom use within marriage invariably met resistance.

To elaborate on this, it is helpful to consider a study conducted in Zambia by Anthony Simpson (2009), who followed students from an earlier study into adulthood. Men, he found, wanted skin-to-skin contact; they argued that women needed to feel the semen entering their bodies. Many of Simpson’s respondents said that they felt uneasy ejaculating into a condom; echoing Mary Douglas (1966), this was seen as ‘matter out of place.’ Some men even feared that their semen would be captured and used by women for love potions. Other men feared that condom use would prevent speedy ‘rounds,’ a sign of sexual strength (Simpson 2009: 140), which was important given their struggle to live up to expectations of manliness by demonstrating sexual potency. And while they acknowledged the need to protect themselves and their sexual partners from HIV, they could not imagine how this could be done in real life. Those who did use condoms reportedly came to enjoy taking a longer time in sex, acknowledging that women had the right to expect their partners to attend to their needs and desires, but even in this case, condoms were still seen to reduce male potency and to result in a ‘waste’ of semen. Following a ‘hydraulic’ model of sexuality, they wanted their semen to flow.

Bodily Fluids for Sexual Health

Arianna Huhn in the next case study points to the importance of the flow of bodily fluids, not only for sexual health but also for health more broadly. Her interlocutors, she explains, believe that both foods consumed with the mouth and sexual fluids absorbed by the sexual organs influenced whether an individual gained or lost weight. Men and women believe that sexual fluids are essential for vitality, just like vitamins. They are seen to enter the body through women’s vaginas and men’s urinary tracts. A woman, her interlocutors asserted, would not become fat—a desired state—without such sexual vitamins. For men, the challenge is one of balance: too little sex makes their bodies big and soft, due to the unreleased sperm, while too much sex makes them frail. Huhn points to the implications of her findings for safe sex programs. If women need sperm to grow fat and healthy, they are not likely to want to use condoms.

3.2 Body, Sex and Diet in Mozambique

*Arianna Huhn*¹

It was a warm afternoon in early June 2010, and I was among a group of women waiting for a meeting of the local chapter of Organização das Mulheres Moçambicanas (Organization of Mozambican Women) to commence. We sat outside of the group secretary’s home, legs outstretched and covered in the multi-functional and colorful *capulana* cloth ubiquitous in East Africa. I wore my standard all-terrain sandals. The other women’s feet were either bare or sporting flimsy, colorful flip-flops adorned with images like the Portuguese flag or Mickey Mouse. The shoes were cheap in price and in quality, but they were one of few affordable footwear options for a population living far below the poverty line. The winds blew lightly, stirring up barely audible waves in the nearest bays of Lake Niassa.

The women chatted and joked quietly, the conversation eventually turning to my recent weight gain. “Arianna,” Maria began cautiously, “You have really grown fat.” I am a smallish-framed woman, and had gained enough weight over the previous six months to elevate my Body Mass Index (BMI) from around 19 to 20—not a dramatic difference, and certainly not qualifying me as ‘fat’ by biomedical standards, but still a noticeable change.² Several other women turned to join the conversation, adding their own observations of my increased breast size, the girth and number of lines around my neck, and my emerging love handles. The women laughed boisterously, clapped their hands together, and slapped their thighs in response to the litany. They jockeyed for space near to me so as to point out the specific features being discussed.

It wasn’t that gaining weight was something in itself funny or negatively viewed—in fact, becoming larger in bodily dimension is usually evaluated quite positively in much of Africa (Fogelman 2009). The humor lay in the novelty of the conversation topic, and the perceived source of my enlargement. Fatima finally breached this topic openly, commenting between fits of laughter that, “Arianna’s husband must be feeding her *very* well.” While I agreed that the observations about my body were on target, I had to quibble with Fatima’s explanation—my husband primarily occupied himself for our year and a half in residence by writing emails and sleeping. I responded to Fatima by explaining that my research grant was our family’s only source of income, and because these funds were purchasing our food, it was logically *I* who was feeding my *husband* well, not the other way around.

The women burst into a fit of laughter at this literal and preposterous statement. Fatima, more sympathetic to my despondency, went about explaining that by ‘feeding’ she was euphemistically referring to sexual intercourse. Through further conversations that day and in the ensuing months, I came to understand that the transference of sexual fluids is locally reckoned to be an essential determinant of body size. In this case study I explain these principles of local ethnophysiology and consider their potential ramifications.³

Diet and Body Size

To begin to understand sex as equivalent to food in contributing to bodily dimension, we must first consider local conceptions of nutrition. In brief, people in the Lake Niassa region see food as consumed primarily to ensure vitality (*thanziti*). They categorize foods by whether or not they provide strength and power for the body to do its daily tasks. Deceptively similar to biomedical understandings, ‘vitality’ is distinct from life-giving properties, such that food is consumed specifically for *energy*, rather than to ensure the continuation of life (which is dependent on spiritual forces). Vitality enables individuals to care for themselves and for others, which is a fundamental moral duty and a necessity for achieving social personhood, or status as a community member via interconnectivity and interdependence. The Portuguese word *vitamina* (vitamin) was ubiquitous in the discussions that I engaged in and overheard about food in relation to these effects. Acquaintances explained that foods with *vitamina* become blood, which provided the consumer with vigor and health to farm, cook, care for children, and so forth. Alternately, foods deficient in *vitamina* left or rendered the consumer’s body weak, tired, and unable to engage in productive work (Huhn 2013).

Where a person eats plenty of *vitamina* foods, his or her body becomes plump to its full capacity. For some this may be a BMI of 19, for others a BMI of 26. Eating more *vitamina* is a sure way to become fatter, but not necessarily *fat*, and a person who is not regularly consuming *vitamina* will become thinner, but not necessarily thin. Fat and thin, in local formulation, are relative states dependent on each individual’s body, circumstance, and predispositions, rather than objective categorizations based on a calculation of weight and height. This explains why I received smirks when I first arrived in Metangula and explained my research agenda as related to body size and diet. “It is fine that you have an interest in our traditions,” one of my research assistants eventually said to me. “But, what a person eats does not change his or her body.” Words from Verónica, a middle-aged obese woman, typified others’ comments: “Some people say that diet makes a person thin or fat. But this isn’t true.” She reasoned, as did many, that she ate the same thing each day as others in her family who were of drastically different bodily dimensions. Verónica pointed to her adult son, who had a healthy BMI of 21. “A person’s body size,” she explained, “just comes out that way.” No specific foods can aid a person to achieve *absolute* fatness or thinness, as it is only the *relative* states of becoming fatter or thinner that correlate with diet.

Further complicating matters, foods do not possess stable properties for provisioning *vitamina*. Social circumstances also impact *vitamina*: an individual suffering from depression, for example, will only taste bitterness when consuming food. The unpleasant experience impedes the transformation of foods into blood and vitality, resulting in smaller bodily dimensions rather than largeness. It was thus not unusual for me to hear a clinically thin person told enthusiastically that he or she was ‘fat’ when regaining strength after a recent bout of poor health or after experiencing a financial windfall. Similarly, ‘thin’ was a relative evaluation, and it was not oxymoronic to hear a person who was quite rotund declare his or her thinness if he or she was ill or in emotional distress. The ability of a situation to affect *vitamina* properties was driven home for me one afternoon when conversing with a man at a Metangula bar. Discussing his recent bicycle accident, Paolo suggested that unpleasant things diminish our energy and will to live, and so our sanguinity. “Blood,” he said, “is things that taste good.” He added, “If there are problems in the house, people in that home do not eat. They have no appetite. Nothing tastes good to them.” Helena joined the conversation and added that even sugar would taste bitter to someone who had problems. “The tongue only works when a person is without worries,” she said. An unhappy person, in other words, will veer toward their thinner form, regardless of diet.

In addition to diet and circumstance, people seemed to be working out the idea that an individual’s body could also artificially swell when suffering from *bipi*, or high blood pressure (B.P.), referencing a diagnosis that some larger individuals are given at the local hospital. Rather than being understood as a *result* of largeness, *bipi* seemed to be emerging in local formulation as an illness itself, with obesity a key *side effect* and symptom. The blood of a person suffering from *bipi*, informants explained, would be foamy, causing the *appearance* of largeness, despite lack of health. Several of the bigger-bodied women I knew justified their size with *bipi*, seemingly as a way to deflect their better-off status, which can be an invitation for family petitions for assistance, or accusations of sorcery.

Sexual Vitamina and Gender

In addition to diet, social circumstance, and *bipi*, another factor influencing body size in Metangula is sexual activity, and specifically the exchange of *ubazi* (sexual fluid). The sexual fluids of a man enter into a woman’s body through her vagina, and the sexual fluids of a woman enter into a man’s body through his urethra.⁴ From there, the substance becomes part of the recipient’s bloodstream, making sexual ‘*vitamina*’ just as necessary as alimentary *vitamina* for the production of blood, and so vitality. Sexual *vitamina* is, however, distinct from and complementary to the dietary variety, rather than a substitute for it. As Lúcia said when I asked her why a sexually inactive person couldn’t just, say, eat a lot of tomatoes to ensure his or her strength, “Can a woman eat tomatoes with her vagina?” Nope.⁵

The effects of sexual *vitamina* on the body, however, unlike alimentary *vitamina*, seem to be distinctly gendered. For a woman, acquaintances explained to me, the *vitamina* of a man is necessary to reach the larger dimensions of her body size potential. A woman cannot fatten (though she can be fat), or otherwise reach her predisposed girth extreme, which is a sign of health and social interconnectedness, without regular sexual intercourse. While estimates varied, ‘regular’ seemed to mean at least roughly once per month. If a woman does not have sex at this interval, I was told, she deviates toward her predisposed thinner form. At the Health Center and around Metangula, I encountered many women who said they felt weak and complained that they were becoming thin from being unmarried or otherwise lacking sexual encounters. Those who had been seen by a medical professional often reported that they were diagnosed as suffering from anemia. This signaled to both the medical technician and the women being treated that they were deficient in blood. For the women, this indicated that their blood was ‘moving alone’—without a male intimate partner. When I expressed skepticism, multiple women added that medical professionals they met with had asked if they ‘had a husband’ (culturally implying a regular sexual partner) as part of the diagnostic process, suggesting concordance with their own interpretations. And rather than being given medicine, several said, they were instructed to have sex to address their health problems. I could not find any member of the current medical staff who would confirm these rumors. Similar perceptions, however, were so strong in the provincial capital Lichinga that the Anglican diocese put together a brochure extolling the value of semen for sexual reproduction *only*, not female health (Rebecca Vander Meulen, pers. comm., 11 February 2011).

The import of men receiving female *ubazi* through sexual intercourse is not as clear. Acquaintances did not conceive of a woman’s sexual fluids as necessary for a man to fatten. In fact, *lack* of sexual activity makes a man softer and larger as his body fills with unreleased sperm and, like *bipi*,

makes his blood foamy and his body artificially big. This happens, I was told, if a man does not have sex often—at least once every six months by some accounts, at least once every week by others. Acquaintances pointed to the round bellies of male government officials whose families had not traveled with them to Metangula as evidence that male abstinence leads to rotundity. When I observed that some of these men were also thin, I was reminded that everyone's body has its own predispositions. Men having 'too much' sex (regular intercourse three or more times a day) are in equal danger of frailty, I was told. Again, however, this is unrelated to female ubazi. Rather, such men run out of their own ubazi, and new supplies have to be created from vitamins siphoned from their blood, negatively prejudicing vitality and so leading to bodily thinning.

Abstinence is one way that such men could regain their strength. Lourenço, an acquaintance in his 30s, for example, explained to me that he refrained from sex with his wife whenever he found that he was lacking the strength to collect bamboo or make bricks. Being poor, he said, he did not have the luxury to simply eat well to regain strength when sanguine vitamins was redirected for sexual activity. Another strategy for enhancing sexual fluid production without risking blood loss was to eat specific foods. Men commonly snacked on sugarcane in the marketplace, soaked rice was one of few foods I witnessed men preparing for themselves, and acquaintances often sent me home with raw cassava "for my husband." Additional ubazi-enhancing (but *not* blood-building) foods include peanuts and coconut meat.

While women can also eat ubazi-enhancing foods to increase their sexual fluid output, they are less likely to do so for three reasons. First, any excessive ubazi just leaks out of a woman's body; it cannot be stored internally as it can in a man's body. Informants pointed to regular vaginal secretions as evidence. Second, both women and men suggested that a woman's sexual appetite is not as voracious as that of a man's. A woman can thus have sex once and be satisfied for long enough, before having sex again, for a new supply of ubazi to be created without haste or depleting her blood supplies. Finally, female ubazi is not an especially prized part of sexual experience in Metangula. As elsewhere in Africa, informants indicated a male preference for dry sex, and women took measures to both tighten their vaginas and reduce their sexual secretions through use of astringent substances inserted into the vaginal canal. Adult woman I knew candidly pointed to plants like kobwe beans and tomato vines maintained in their yards, from which they harvested leaves from for such purposes. The preference for vaginal dryness is also perhaps why the importance of female ubazi for male health is culturally unelaborated.

Conclusions

The correlation between diet and body size in Western biomedicine is complicated in Metangula, where the energy-provisioning properties of foods are malleable, evaluations of largeness in bodily dimension are based on individual predisposition rather than standardized scales, and sexual intercourse is conceived as a literally embodied experience integral to female health. While Metangula's ethnophysiology may be unique to the locale, or to the region, the logic complements broader African philosophies that envision the merger of bodies through sexual union as creating a metaphysical bond between regular sexual partners, through which earthly life continues and wrongdoing can summon the wrath of spiritual forces (Heald 1995), and interpretations of larger bodily dimensions indicate both good health and community engagement. The necessity of another person's presence in order to be personally complete further speaks to the central importance of interconnectivity in broad African conceptions of both personhood and wellbeing. This is not in the sense of selfless collectivism effacing individuality, but in persons being literally composed and created through their encounters with and dependencies on other human beings (Geissler and Prince 2010).

Considering such manifestations and integrations of local ideologies about personhood in relation to the body can be useful when implementing programming related to health, sex, and diet anywhere. In African settings, and perhaps elsewhere, local ideas about sexual fluids have important implications for the prevention and spread of sexually transmitted diseases (STDs). If receipt of sexual fluids within the body is necessary for female wellbeing, for example, women are likely to be reluctant to use a condom during sex, and condoms were not positively evaluated by my acquaintances in Metangula. While many condoms were sold in the market and health professionals gave away many more at the Health Center, the end use was often children filling the condoms with air and using them as balloons, or wrapping them in plastic bags and string to form homemade soccer balls. Few people regularly purchased condoms and used them for health or contraceptive purposes, and even

local NGO-organized volunteers were at a loss to explain to onlookers at a STD-themed lecture I attended how a woman was supposed to get her vitamins if she used a condom. Similar public health campaigns may fall flat if condom use is the only pathway for health presented, as it is directly at odds with local perceptions of what leads to wellbeing. Similarly, programming focused on extolling the nutritional properties of foods and the importance of a balanced diet may present information that is not easily compatible with local notions of nutrition in relation to broader social circumstance, with conceivable impact on the effectiveness of programming related to both under-nutrition and over-nutrition.

Notes

1. This case study is based on 16 months of ethnographic research conducted between 2009 and 2011 in the town of Metangula, Mozambique. The study was made possible through generous funding from a Fulbright-Hays Doctoral Dissertation Research Abroad Fellowship and the Department of Anthropology and Office of the Dean at Boston University.
2. BMI is calculated by dividing an individual's weight in kilograms by the square of his or her height in meters, to roughly determine if a person is under- or over-nourished. BMI less than or equal to 18.5 is categorized as 'malnourished,' between 18.5 and 25 is categorized as 'normal,' greater than 25 is 'overweight,' and greater than 30 is 'obese.'
3. During the period of research, Metangula was home to approximately 10,000 residents, most subsistence-level farmers or petty traders. The vast majority of these individuals ethnically identified as Nyanja, an ethnicity that scholars class as part of the group of Bantu-speaking matrilineal peoples called the 'Maravi Cluster.' My data come primarily from unstructured conversations held in Chinyanja with a diverse group of 20 principal informants. All names have been replaced with pseudonyms to protect the identities of informants. The body of water on which Metangula is located is known as 'Lake Niassa' in Mozambique, 'Lake Malawi' in Malawi, and 'Lake Nyasa' in Tanzania, all of which border the body of water.
4. The heterosexual focus of cultural renderings of ubazi exchange does not, of course, rule out the possibility of same-sex attraction or intimate encounters. It simply speaks to the gender complementarity embedded in Metangula and many sub-Saharan African societies, whereby male and female are considered incomplete entities made whole only through their union.
5. Tomatoes are one of four foods locally categorized as vitamins-enhancing substances. The others three are onions, oil, and sugar. See Huhn (2013) for additional discussion of this point.

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The highly dynamic field of family planning and reproductive health illustrates how medical technologies are intertwined with societal notions of appropriate sexuality, and how such technologies can oscillate between being oppressive and being liberating. Anthropological research in this field has not only described the appropriation and use of reproductive health technologies, but also the way in which understandings of sexuality and health more broadly can inform the design of reproductive health programs, and how societal influences affect their development. Such links and influences are also visible in HIV prevention and AIDS care programs.

Early in the AIDS epidemic, anthropologists collaborated with AIDS activists and policy makers in setting up HIV prevention programs. Many such programs, however, have had a hard time addressing the lack of willingness among men in many settings to use condoms to prevent HIV transmission. Anita Hardon (2010) described how a group of feminist researchers based at the Population Council in New York, in consultation with women's health advocates from around

the world, sought to resolve this problem by developing microbicides that can be used vaginally, to help women protect themselves. Microbicides are chemical agents that are being developed to prevent and treat vaginal infections and STDs, including HIV. Developing these new female-controlled barrier methods required creating new alliances between researchers, donors, health-related manufacturers, clinics, health workers, patients, and women's health advocates. Like the contraceptive pill, microbicides provide women with more power over their sexuality and sexual health than did the use of male condoms, while giving them more responsibility. Hardon (2010), one of the authors of this chapter, participated in the Women's Health Advocacy Committee on Microbicides, which was set up to advise researchers at the Population Council on engaging with women's sexuality in developing these technologies. She was asked by the Population Council to prepare a report for a meeting on the acceptability of microbicides from a women's health perspective. She did so by reviewing the scientific literature on women's use of vaginal products, and by asking friends working in different fields to explore vaginal products and their use. They found that women used many different substances vaginally for diverse reasons, ranging from sexual pleasure and the cleansing of sperm to the prevention and treatment of reproductive tract infections. In her report, Hardon argued that vaginal products were acceptable to women, and she suggested that protecting against reproductive tract infections, enhancing sexual pleasure, and contraception should all be key goals if microbicial products were to be developed.

The envisioned users of such microbicides were women at risk because their sexual partners were unwilling to use male condoms and/or women who wanted to protect themselves from HIV without their husbands' knowledge. Sexual enhancement and broader protection against reproductive tract infections were therefore not included in the terms of reference provided by the Population Council. How do female-controlled barrier methods intersect with sexuality, thus defined, in the various settings where they are introduced? In the following case study, Robert Pool describes how in clinical trial settings women have appropriated microbicides to fulfill their own sexual desires. While developers expected that women would keep the use of the gels secret, social scientists found that women often told their partners about the gels, and that these became a means to increase sexual pleasure.

3.3 Empowerment and the Use of Vaginal Microbicides

Robert Pool

Vaginal microbicides were originally conceptualized by Northern researchers and advocates as a female-controlled means of HIV prevention—something that women, mainly in Southern countries, particularly in sub-Saharan Africa, could use to protect themselves in situations in which male partners were reluctant to use condoms and in which they were unable to negotiate condom use. The assumption was that women would be able to use these products secretly, without informing partners. This assumption was supported in early hypothetical acceptability studies, in which women were asked whether they would inform their partners if they were to use a microbicide. The empowerment of women was central to the development of vaginal microbicides, thus bringing together feminist ideals and biomedical research. However, when products started to be tested in trials in Africa, women's response was not always what researchers and advocates had anticipated. In what follows, I describe how individual women in South Africa redefined empowerment to fit their particular situation in the context of a microbicide clinical trial.

The trial, called MDP 301, was a randomized, double-blind, placebo controlled trial that aimed to determine the efficacy and safety of PRO-2000 gel in preventing vaginally acquired HIV infection. It was conducted at three sites in South Africa and one each in Zambia, Uganda, and Tanzania. The enrollment of 9,385 women was completed in August 2008, and follow-up was completed in August 2009. PRO-2000 turned out to be safe but not to prevent HIV transmission.

The trial had an integrated social science component, which focused on a random sample of almost 8 percent of trial participants. The aims of this component were to assess the accuracy of the data on sexual behavior, adherence, and condom use, to investigate acceptability of the product, and to assess participants' comprehension of the trial and the informed consent procedures. Women were also asked whether they had informed their partner about the trial and the gel, and they were asked about partner involvement in gel use. Where possible male partners were also interviewed. Below, I draw on data from the South African sites.¹

Before enrollment women received detailed information about the trial and the product. As part of the informed consent procedure, they were taught about HIV and risk behavior, and repeatedly they were told that the efficacy of the product was unknown and that it was therefore essential for them to use a condom to protect themselves whenever they had sex. Women were tested on this knowledge before they were enrolled, and their comprehension was continually monitored throughout the trial. They also received detailed information on the various clinical procedures and they were taught, using anatomical models, how to insert the gel using the pre-filled applicator.

Women who participated in the trial attended the trial clinic every month, where these messages were repeated and where they underwent clinical tests and examinations and received any necessary treatment. At the clinic they could also ask questions related to the trial and their health. As a result, they not only learnt about the trial and the gel, but were also educated on their own anatomy and on sexual and reproductive health more generally. The trial also formed a context in which women could gather and communicate about 'women's issues' and discuss partners and relationships. They encouraged friends and neighbors to join, and met other women during clinic visits. As a result, a feeling of community and ownership developed among participants, who often spoke of 'their' trial.

The Appropriation of Empowerment

Contrary to the notion that microbicides would be used secretly, almost all women in the trial informed their partners about the gel. The most important reason was that they felt that men had a right to know, given that they were also being exposed to the gel.

I think it is not right keep it a secret from your partner, because if you come across a problem, if the gel affects him, he won't know what affected him, whereas you knew but you kept it a secret. I think it's the right thing to tell your partner about the gel.

How, women asked, would they explain to their partners if the gel turned out to have side effects, and especially a negative effect on their (the men's) health? Even women who did not inform their partners still thought that it was right that they knew.

I think it is the right thing to do, but I made a decision not to inform him about using the gel [because] men ask too many questions. He would have asked me: why are you using the gel, and are you sure that it is going to protect you, and so forth. So I was avoiding questions like that when I decided not to tell him.

A second reason was that men would probably notice the gel anyway: they would feel a difference in lubrication during sex, or discover the boxes of applicators, or catch their partner inserting it before sex. Women said that men thought of themselves as being in charge and would be angry if 'their' women ignored their authority. Both men and women said that if a man noticed that his partner was inserting something in her vagina before sex, he would be likely to suspect that she was using *muti* (magical substances) to bewitch him.

As a result, almost all women did inform their partners about the gel. Most women (75 percent) told their partners about the trial when they first heard about it, and before they enrolled. Almost all the others told their partners soon after enrollment. A few men discovered the gel early on while the women were still procrastinating about informing them, and a few others discovered it later, after their partners had decided not to inform them.

This 'informing' was sometimes a gradual and diffuse process. For example, one woman said she had 'told' her partner straight after enrollment. But she had already been discussing the trial with him for a long time in relation to a cousin who was already enrolled, and she had told him she wanted to go to the same clinic and get tested. So she had been grooming him for a while before she actually

told him that she had enrolled. It was common for women to first tell their partners that they were going to the clinic to find out about a study that was taking place, or to get themselves tested, and then coming home with the information sheets and the gel and explaining further. Confronted with a *fait accompli*, men found it difficult to refuse.

Women with 'difficult' partners were often patient and creative in the way they ended up getting their partners to accept gel use.

Interviewer: Did your partner know that you were using the gel?

Woman: He did not like it. I told him after I enrolled in the study and he refused to allow me to use it. I left it like that and I said to him: it's fine . . . [but] I used the gel without telling him and we had sex all the time.

Interviewer: Did he feel that you were using it?

Woman: No, he did not feel it. And after two months using it in secret I talked to him again about it. But I did not tell him I was using it in secret. Then he said that if I used the gel he would not have sex with me. I asked him why. He said that he did not know if sex was going to be the same or not. Then I asked him how he felt about our sex and he said that it was okay. I then told him I had been using the gel, and he said that I could continue to use it.

Interviewer: How did he feel when you told him that you used the gel secretly?

Woman: He was angry and we had a little argument. But he realized there was no difference when I used the gel.

Sometimes women made use of the formal gender power relationship of male dominance and female obedience to neutralize suspicion. For example, one man refused to allow his partner to continue using the gel, but she ignored him and continued to use it anyway, and he never suspected anything. She could do this because it was inconceivable to him that she would disobey him.

Because he knows that when he says he does not like something I am doing, I don't argue with him: I stop straight away. He is always proud that I respect him by obeying his instructions. He does not know that I am continuing using the gel.

Other men forbade their partner to use the gel but, when the women continued nonetheless, appeared to be aware of this but pretended not to notice, possibly in order to avoid confrontation and open questioning of their 'authority,' thus avoiding potential loss of face. Some men confirmed this, and in some of the focus groups, men explicitly made a distinction between actually having power in the relationship and only *appearing* to the outside world to have power. So while being dominant in the relationship was important for them, it was more important that *other men* saw them as dominant. As one man put it:

There are some men that meet and talk. It's just that I'm going to be proud. I cannot meet with my friends and tell them how my girlfriend and I really live at home. I make out as if I do not take orders from a woman. They don't know that when I get home I dance to her tune.

Finally, as the quotes from two women below show, the use of the gel in the context of the trial gave women the pretext and the confidence to address the issue of condom use, which is generally considered to be unacceptable in regular relationships. Indeed, this was one of the main reasons for the development of vaginal microbicides in the first place.

I had to sit him down, show him the gel, and tell him: each time we have sex I will use one gel and you have to use a condom. I explained that if I use the gel for one round of sex, then we have to use another gel for the next round. And he also has to use another condom.

(*Woman A*)

I told him that I was participating in a study that involved using gel. I told him I had to use the gel and he had to use a condom. And that when the study finished, it didn't mean that he could stop using condoms, oh no!

(*Woman B*)

Conclusion

The empowerment of women envisioned with the development of vaginal microbicides entailed women using such products secretly. No one took into account the possibility that women would consider it wrong to use such products secretly, or that it might be impractical to do so in regular relationships. What was also not taken into account is the importance of the precise nature of the relationship between the woman and her partner. So whereas some men immediately were open and communicative in their relationship, accepted the gel easily, and integrated the gel into their foreplay, others were uncommunicative about the relationship and sex (except to say when they wanted it), and were suspicious of the gel.

Advocates and researchers also underestimated the power that women had, because they had tended to be too focused on the public surface of power relations and ignored the underlying dynamics of relationships in practice, and as a result they assumed that secrecy was the solution. So for example, when women discussed power and authority in relationships, they rarely said that men *were* the decision makers, but that they *liked to think* that they were, suggesting that they—the women—had more power than they appeared to have on the surface, but that they had to exercise it in more subtle and indirect ways.

Arguably, the sort of empowerment discussed here, of course, is not ‘really’ empowerment because it operates within the existing hierarchical structures and relationships without changing them. But the same applies to secret use. The difference is that the former is emically directed, by the women themselves, and grounded in their everyday practice, whereas the latter is etically directed, by the research and advocacy community, without taking the diverse practices on the ground into account.

This ‘power from below’ was stimulated and supported by the trial and clinic setting. This was reinforced through contact with other women with whom they could exchange experiences relating to the use of the gel and the response of partners. This knowledge, and the feeling of being part of the trial community, empowered women participants to take on partners and persuade them to accept gel use, and if they were unable to convince reluctant partners, it gave them the confidence to defy them and use the gel secretly anyway. It also gave them the tools and the confidence to go home and initiate a broader discussion about HIV prevention and condom use.

Note

1. This case study is based on data from 154 in-depth interviews with 45 couples (women who shared information about the trial and involved their partners from early on, and their partners, all interviewed at least once), 60 interviews with 30 women who did not immediately inform their partners, 31 focus group discussions with trial participants, 18 focus groups with non-trial community women, and 18 focus groups with community men. The women in this case study were all in regular relationships.

As Pool has illustrated, the clinical trials in which the microbicides were tested thus became sites where new sexualities were constructed. While the designers did not imagine that the products would enhance sexual pleasure, women and men appropriated them for this purpose. Facing fear of HIV transmission, the participants in the trial appropriated microbicide gels into their sexual relations. The trials gave women the pretext and confidence to address the issue of HIV prevention and condom use, which, as we have seen above, is generally considered to be unacceptable in intimate relationships.

Sexual Enhancement and Confidence

Recent studies of sexuality and gender in Africa point out that economic constraints and the absence of educational and job opportunities disempower men, and make it difficult for them to live up to the expected ideal of the man as the provider of the family (Silberschmidt 2004).

Young men try to overcome feelings of unmanliness by exerting a kind of masculinity that is based on sexuality (Aboim 2009; Cornwall 2003). For example, Christian Groes-Green (2011) has illustrated that in Maputo, Mozambique, young working-class men lack the means to offer their girlfriends gifts or financial support, and therefore become preoccupied with becoming skilled lovers. As he described it, these young men invest in learning new sexual tricks and positions, and consume certain drinks, drugs, and food to enhance their performance. Mozambican men's 'sexualized masculinity' was 'based on the man's ability to perform sexually, give erotic pleasure and become respected due to his sexual satisfaction of the female partner' (Groes-Green 2011: 289).

Similarly, Jennifer Cole (2005) writes about unemployed young men in Madagascar, the *jaombilo*, who use their good looks and sex appeal to gain support from young women working in the sexual economy. Although being financially supported by a woman could potentially lead to feelings of diminished manhood among *jaombilo*, their masculinity was based on cultivating their appearance and sexual desirability. Another study shows how young men in Addis Ababa resort to using Viagra to gain sexual confidence (Both and Pool Forthcoming; Both 2015). Over time they become dependent on the drug, fearing that they will not be able to perform sexually if they do not take it. From a young age, boys in many parts of Ethiopia learn that they can only be proud if they carry out manly tasks, like being good at sports or doing well in school, and later in life they are expected to achieve financial or social success. The absence of promising socioeconomic prospects has been noticed as a constraining factor for young men in fulfilling these normative tasks of adult men. To overcome their frustrations and feelings of hopelessness these men turn to chewing *khat*, watching movies, and taking Viagra.

Rethinking Masculinities

The final case study contributed by Sebastian Mohr takes us to a specific clinical setting, a sperm bank in Denmark, where healthy potent men come to donate their sperm. Mohr illustrates how female technicians handle the sperm with much gentle humor, through which they subtly acknowledge the sexual feelings of the men who donate sperm, and, in this case, also the male ethnographer. In his analysis of this case, Mohr describes how gender and sexuality are made meaningful in the sperm bank, and how the technicians overcome their own feelings of disgust in handling men's sperm. Men boost their sense of their own masculinity by providing the bank with 'good quality' sperm, which Mohr analyzes as a performance of masculinity. While repeated performances make it seem as though sexual identities are natural, men are created as individuals through their employment and appropriation of society's ideas about gender.

3.4 Donating Semen in Denmark

Sebastian Mohr

It is just before nine when I arrive at Andersen Sperm Bank on a cold Monday morning in February. Lise and Signe, the two technicians whom I have gotten to know since I first started my fieldwork a year and a half ago, are already busy in the laboratory. So is Martin, the leading lab technician in charge of coordinating daily activities. After I greet all three of them, Lise and Signe tell me that I have missed one of the best weeks at Andersen Sperm Bank. A number of young soldiers had been here the week before, Lise says and adds while smiling: "It was wonderful to have all those young guys in here." "Why were there so many soldiers?" I inquire. Signe explains, that, apparently, the Danish Army had developed new underwear for combat situations, but this underwear also exposed men's testicles to more heat than is deemed healthy for sperm

development: “They wanted to know whether there were side effects and how they would go about leaving a deposit before taking off to combat,” Signe explains. I was aware that some soldiers deposit their semen before being deployed, but that concerns about underwear would drive groups of soldiers into a sperm bank to seek advice was surprising. I mention that I had thought that the Danish Army would have specialists for these instances. Lise and Signe agree. “But too bad you missed all those well-trained guys,” Lise jokes.

Lise and Signe joke a lot as part of their work. Humor is one way in which they frame their daily encounters with sperm donors and their work with semen samples at the lab. Yet, the fieldnote is remarkable because of the subtle ways sexuality and gender are invoked through the use of humor when Lise and Signe describe their encounters with men who donate their semen. Without directly referring to either sexual desire or practices, or concrete interactions with sperm donors, they were nevertheless able to create a meaningful context that invoked sexuality and masculinity. They also created a situation in which my own possible desires as an anthropologist were addressed. Lise’s comment, that it is too bad that I had missed all the well-trained guys, marks us both as individuals who desire these kinds of encounters and bodies, while simultaneously also making the young soldiers—representing a particular kind of masculinity—into desirable men with desirable bodies. Thus, Lise and Signe remade the sperm bank as a ‘sexualized’ and gendered space. But there is also a more obvious observation to draw from the fieldnote: young men are concerned about their fertility and make use of possibilities to conserve their potential to procreate. Their bodies are exposed to certain technological innovations and interventions that directly influence whether they will be able to father children or not. Biomedical knowledge about male bodies and semen, its assessments, and technological intervention in male bodies are thus changing the ways that men think about themselves and their bodies. Attending to instances at Danish sperm banks in which gender and sexuality were invoked, as well as interviews with sperm donors about their experiences of donating semen, I want to explore how and when gender and sexuality are made meaningful in the context of sperm donation in Denmark, and how biomedicine and biotechnology make their ways into Danish men’s gendered self-conceptions. I draw on fieldwork at three sperm banks—Andersen, Jensen, and Miller—and interviews with 26 sperm donors. Whereas the Andersen and Jensen sperm banks are located in Denmark, Miller Sperm Bank is a subsidiary location of Jensen Sperm Bank in the USA.

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Alfred and I had agreed to meet in my office for the formal interview. He had contacted me via my research project’s homepage. Jensen Sperm Bank, where Alfred was a donor, had sent out an email to all its current sperm donors explaining my research project. The email also contained a link to the research project’s homepage for those interested in participating. In his mid-20s, Alfred spent much of his professional and spare time on activities connected to physical exercise. His body was built accordingly. When I met him, he had been donating semen for about a year and would usually visit Jensen Sperm Bank twice a week. Alfred had no children of his own, self-identified as heterosexual, and was not in a relationship at the time. He had participated in my research project out of curiosity, he explained, but also because he thought that he had an obligation to critically reflect on what he had committed himself to. It became clear early in the interview that having to masturbate at the sperm bank was of central concern for him. We were talking about the organizational and legal frameworks of sperm donation in Denmark when I asked him if he had been aware of how sperm donation was organized before becoming a donor:

Alfred: As I said, I was curious and my roommate at the time was a sperm donor before I started. I was curious to hear how that was, and I was maybe also a little bit outraged about, maybe not outraged, but also curious about, do you just stand next to each other, do you just close a curtain, do you go into a room, because I thought that that would be a very strange situation. I mean, this is not, usually you think of your sperm, that is something that you only have with yourself or with your girlfriend, something intimate, and just leaving it at some random place, that is, well that was a strange thought somehow. If you don’t think that is strange, then you’re probably missing some kind of empathy, if you’re really completely indifferent about that. So, yes, of course one asks about how that works. And my mind was put at ease that once you’re done, then you don’t have to hand it over to someone that is just waiting for it, but you just set it [on the counter] and leave.

Anticipating a transgression of personal space, Alfred was concerned about encountering other men masturbating, and he felt ashamed about having to approach people working at the sperm bank with his semen sample in his hand. His feeling of shame and embarrassment stems from having to negotiate his sexual desires in the semi-public environment of a sperm bank, for him a *transgressive act* (Donnan and Magowan 2009) which marked the boundaries of his concepts of (appropriate) male heterosexual conduct. Donating semen in a sperm bank breaches normative frameworks that enforce compliant behavior in relation to gender and sexuality (Mohr 2010; 2014a).

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These kinds of transgressive acts are also at play when semen samples are handled at the sperm bank laboratory. As already noted, sperm bank staff use humor to handle these kinds of transgressions, and thus playfully negotiate the ambiguous context of handling donor semen. Lise and Signe, the two lab technicians at Andersen Sperm Bank, both had experiences working with bodily fluids and substances (animal semen, human feces, urine) before joining Andersen Sperm Bank. This kind of educational and experiential background was very common among the lab technicians I met during my fieldwork. However, working with human semen provided for a context marked by potential transgressions of normative claims to gender and sexuality, something that is not at stake in other contexts and that relates to semen's symbolic meaning as a sexual substance in Danish culture.

Whereas semen at the sperm bank laboratory is made into a procreative compound, a substance that has been called *techno-semen* (Moore and Schmidt 1999) in order to enter a global reproductive supply chain, semen is usually encountered as part of sexual practices and therewith embedded in symbolisms of lust, desire, and disgust, a point that also becomes clear in Alfred's quote above. Handling semen's ambiguity thus becomes the focal point of work in the sperm bank laboratory, something that I call *containment*: material-semiotic practices which involve semen, its various containers (specimen cups, test tubes, vials, and straws), as well as computers, centrifuges, and cryopreservation tanks in order to make donor semen into a governable reproductive substance by managing its lust and disgust potential (Mohr 2014a). The containment of semen ensures that work at the laboratory is successful. In situations in which the containment of semen is not successful, on the other hand, semen is re-embedded into its symbolic meaning as a lustful and/or disgusting substance.

During participant observation, I paid special attention to instances in which lab technicians were talking about getting semen on their hands and equipment or about encountering blood or pubic hair in semen samples. These encounters provoked disgust since they reminded technicians that semen samples actually came from real men, something that they normally did not think about when processing semen samples. For Julia, a lab technician at Miller Sperm Bank, a subsidiary location of Jensen Sperm Bank in the USA, it was the smell of semen that was nauseating:

It is Thursday morning in early December, and Julia and I are in the lab. It is not busy today, so Julia has time to talk about working in the lab. I ask her if there are special challenges when working with semen: "The smell is just horrible. I can't get used to it," says Julia. Having noticed a particular smell at sperm bank labs myself, I want to know how she would describe that smell: "It is a musky smell, almost like dark mustard but just a little bit sharper," Julia replies. When opening specimen cups, she would deliberately hold samples away from her body in order to avoid encountering the smell: "But I also don't like it when the sample is clumpy," Julia adds. She then tells me that there once had been a donor whose samples would always be clotted and she had found it hard to work with them. "Another thing that is gross is when you have a hard time getting a sample into the pipette, and then it just drips on your hands and stuff, disgusting," Julia then reflects on how her work at the laboratory is perceived by outsiders: "For a really long time, my boyfriend would not say anything about my work to his colleagues. And when he did, they made fun of him as if this were some kind of sex work or something." I am astonished by this story. Julia then says while smiling: "But I look at this from the bright side. I keep saying to him [her boyfriend] that I am his dirty little secret," and we both break out in laughter.

Work at sperm bank laboratories is centered around encounters with semen. Aimed at containing semen as a reproductive substance, these encounters involve technological equipment and biomedical substances like dilution and freezing solutions that help to remake semen into techno-semen, an exchangeable substance used for third-party reproduction. Nevertheless, despite all this

containment work, semen's symbolic meaning as a lustful and/or disgusting substance breaks its way into the context of lab work at all times. As Julia's experience shows, semen's physical characteristics such as smell and consistency can provoke disgust and serve as a reminder of semen's symbolic meaning as a sexual substance in an otherwise hyper-technologized environment. Julia's story points to how gender and sexuality operate in the context of work with semen samples. Semen is perceived as the result of gendered sexual practices. It is made meaningful as a substance emitted by male bodies due to sexual excitement, and working with donor semen is, as a result, understood as a transgressive act that breaches established scripts for gender and sexuality, "some kind of sex work," as Julia put it. Staff at sperm bank labs are aware of how gender and sexuality converge in semen, and they thus handle this particularity of their work accordingly through humor—in Julia's case framing her own work as "a dirty little secret."

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This convergence of gender and sexuality in semen is a cultural phenomenon particular to contemporary Danish and Western European contexts. As Gilbert Herdt (1987) demonstrated in the case of the Sambia in Papua New Guinea, the repeated insemination of boys with semen from older men is understood as securing the successful transition from boy to manhood and not necessarily as a homosexual or even pedophile act, as would be the case in Denmark or most other contexts. Yet as will become clear, beyond this particular convergence of gender and sexuality in semen, the context of sperm donation in Denmark also makes for a coming together of biomedical practices and men's gendered self-conceptions (Mohr 2014b). As men were narrating their experiences of being a sperm donor to me, it struck me how their understandings of masculinity were tied to the biomedical practices involved in sperm donation.

I met William, in his mid-20s and a sperm donor for about a year, at his apartment for the formal interview. Like Alfred, William had replied to the email sent to donors by Jensen Sperm Bank. Training to become an engineer, he had heard about being a sperm donor from some of his classmates. William was proud of his semen quality. For him it was a sign that he was a healthy man with valuable genetic traits, even though the assessment of semen quality says nothing about genetic health. When I asked him in which way he felt proud about having good semen quality, he said:

William: Well, just that feeling, you know, that you are healthy and well, just as when you are at the doctor's and he says to you: you are a healthy young man. Then you feel like: ahhh, this is beautiful, wouldn't you agree, to know that you don't have any illnesses. The worst thing is to be sick, and it was just wonderful to know that one has good genes.

For William, having good semen quality made him into a "healthy young man," whereby he understood good semen quality to be the result of his healthy male body. Being a sperm donor enabled William to see and experience himself as that young healthy man that he refers to in his quote, and this specific self-experience is only possible because of the biomedical assessments of semen which are part of sperm donation in Denmark. But besides connecting knowledge about his semen to his embodied gendered self-conception, being a sperm donor also had implications for William's experience of sexuality and especially for his sexual relations with his girlfriend:

William: I want to stop at some point [with donating semen] because the biggest price you pay is, and as a guy I can tell you this, you are really restricted by the fact that you have to go down there and have to ejaculate [*at have udløsning*] and that they are supposed to go 48 hours before. I don't live together with my girlfriend, but that doesn't mean that you don't miss this freedom, you know, you can't fall asleep at night or whatever, and then this becomes the biggest sacrifice. Sometimes, I also think about this when I am together with my girlfriend. It is just really hard to avoid those kinds of thoughts, you know, thinking about the money and then wondering if it is worth it. But as soon as I get these thoughts, I try to suppress them. Sometimes though I can't help it; you can't always stop yourself from keeping an eye on this. But in a strange way, somehow I think all of this has also been

good for our sex life. I mean, we have been together for almost 4 years and somehow, just as if, when I have to wait a little longer, in that way that has been good for us. But it is nevertheless a small sacrifice. Sometimes, I have money on my mind, you're thinking: ups, there you go, 300 crowns.

Abstaining from sexual activity in order to be a sperm donor is a sacrifice William is willing to make. Yet in his narrative, thinking of this as a sacrifice seems to be a result of valuing his semen through the amount of money that he receives for his semen samples. The organizational logic of sperm donation in Denmark—orgasmic control, monetary compensation—thus impacts how he experiences his sexuality and how he thinks about his intimate loving relationships. Donating semen changes the ways that men experience themselves. It makes for enactments and embodiments of masculinity particular to the context of contemporary reproductive biomedicine in which the control of masturbation and the assessment of semen regulate what it means to be a man.

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The technologies of sex, sexuality, and gender include, as we have demonstrated, surgeries and chemicals, practices, rules and regulations, and the body itself. Access to these technologies varies by time and place. Some people, globally, by happenstance and access to resources, have relative freedom in defining who they are, what they can do, and what they look like. Other people live in constrained environments as a result of access to resources, personal income, and prevailing social values. International and national legislation, conventions, and programs further frame the control people have over their bodies, and how their bodies influence their positioning in society. These issues—the choices that people make; the divisions in society of ‘men,’ ‘women,’ and other; and the role of sex in forging interpersonal relations and maintaining kinship systems—and in local economies—are key issues for medical anthropologists, and an enduring field of study.

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