A TALE OF TWO TECHNOLOGIES

HPV Vaccination, Male Circumcision, and Sexual Health

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This article brings insights from feminist science and technology studies to bear on recent public debates over the human papillomavirus (HPV) vaccine, which prevents many cervical cancers, and male circumcision as potential HIV preventive. In the United States, attempts to mandate HPV vaccination have activated intense concerns about female “promiscuity,” whereas talk of promoting circumcision against HIV has triggered scant anxiety about American boys’ sexuality. The authors show how intersections among gender, sexuality, race, and age have shaped responses to these two containment technologies—and how the technologies’ deployment both relies on and reproduces meanings of gender and sexuality that constitute the omnipresent “double standard.” The analysis develops an original feminist sociology of containment, explicating how social relations shape the innovation, reinvention, and use of technologies to contain particular sorts of bodies, fluids, and sexual practices—by whom, under what conditions, and for what purposes.

Keywords: health; medical; sexuality; adolescence; children; HIV/AIDS; HPV; cervical cancer

In 2006, two technologies designed to protect sexual health—one very old and one very new—sparked headlines globally: male circumcision and the human papillomavirus (HPV) vaccine. Arguably more efficacious if administered to young children, both show considerable promise...
in reducing the risk of potentially fatal diseases—AIDS and cervical cancer (CC), respectively—by reducing sexually transmitted infections (STIs). Yet while proposals to promote circumcision as HIV preventive among boys and men in the United States have gone largely uncontested outside “intactivist” activist circles, efforts to implement the HPV vaccine raised an outcry among parents, politicians, and policy makers (Casper and Carpenter 2008). Much contention focused on the possibility that intervention—that is, use of the vaccine—would lead to promiscuity among preteen and teenage girls.

Why did reactions to two technologies with ostensibly similar goals—and similarly low reported complication rates—differ so dramatically? To answer this question, we draw on feminist science and technology studies (STS), the biographical approach to pharmaceuticals, and the literature on vaccines and other technologies of containment, specifically those related to sexual health. Given key differences between circumcision and HPV vaccination—especially the gender and age of the children targeted, the relative novelty and effectiveness of the technologies, and the extent to which they are likely to alter extant practices in the United States—a comparative analysis of cultural responses to them can illuminate the subtle (and not so subtle) workings of gender, sexuality, race, and age in the United States. It can also demonstrate how social and cultural factors influence development, distribution, and reception of health-related technologies and how these technologies in turn shape social and cultural dynamics, including constructions of gender, “hygienic” containment, and the sexual double standard.

Feminist STS scholarship reveals that gender and sexuality can infuse every stage of a technology’s life course, including design, development, marketing, and use (Haraway 1997; Oudshoorn 2003). In turn, new (and old) technologies can profoundly reshape gender relations and sexual lives by remaking human bodies, practices, and relationships. This is especially true of reproductive and sexual health technologies, which mark and re-fashion the body’s capacity to reproduce not only “life itself” (Rose 2006) but also (in many cases) deadly diseases. Such technologies may also remake—and are remade by—notions of race and/or nationality, as shown by Briggs (2003) with respect to the birth control pill’s origination in Puerto Rico and by Roberts (1997) regarding “population control” technologies’ impact on Black women. Here we examine two different technologies: circumcision, originating thousands of years ago and newly innovated in the context of HIV/AIDS, and the HPV vaccine, fresh from the corporate laboratory. Analyzing these divergent tools, one surgical and
the other pharmaceutical, as preventive health care technologies lets us see gender and sexuality in new ways, especially as they relate to children’s bodies.

Although feminist STS offers insights about gender and technology, our sociological analysis of containment offers a more complex examination of how gender’s intersections with race, class, age, and sexuality position technologies and responses to them (also see Casper and Carpenter 2008). Here and in our broader project, we reveal how sexual and reproductive health practices unfold in the shifting context of contemporary U.S. biopolitics (Rose 2006). We ask, how have cultural understandings of sexuality, gender, age, race, and nationality—and their interrelations—shaped responses to the two technologies? Why have attempts to mandate HPV vaccination activated concerns about female promiscuity, whereas talk of promoting circumcision as HIV preventive for boys has not (at least regarding U.S. boys)? How, in turn, might uptake of the HPV vaccine and the reframing of circumcision against HIV alter social constructions not only of gender and sexuality but also of age and race? Our focus is on the United States, but these deeply stratified processes have transnational implications (Carpenter and Casper 2009), insofar as American responses to the technologies also influence practices in the developing world.

Technologies such as the HPV vaccine are not therapeutic; rather, they are designed to prevent the onset of disease through containment of causal infection. The phenomena we have called “pharmacologies of containment” (Casper and Carpenter 2008) are implicated in the broader politics of contagion, which inevitably invoke intimacies shared among people. The threat of contagion—the transmissibility of disease—motivates “the establishment of cordons sanitaires in one form or another, the drawing of lines and zones of hygiene” (Bashford and Hooker 2001, 9). In our view, the HPV vaccine is a highly politicized pharmaceutical cordon sanitaire, formed within particular social, economic, and geographic contexts. It embodies the “dream of hygienic containment” (Bashford and Hooker 2001) and as such has activated social cleavages related to gender, sex, race, age, and especially sexuality. As Brandt (1987, 5) notes, “Since the late nineteenth century, venereal disease has been used as a symbol for a society characterized by a corrupt sexuality . . . as a symbol of pollution and contamination.”

If we read circumcision as a kind of symbolic vaccine, as do its public health proponents, and analyze it using conceptual tools of intersectionality, what can we learn about the ways technologies are embedded in social relations? We suggest that pharmaceutical vaccines and surgical prophylactics
differ in important conceptual and practical ways. Our feminist sociological analysis broadens notions of containment by asking under what structural and symbolic conditions such strategies work (or do not). Although a significant public health and clinical literature on nonvaccine containment technologies exists, as do histories of medicine and health focused on contagion (e.g., Anderson 2003; Bashford and Hooker 2001; Brandt 1987), social analyses of nonpharmaceuticals qua hygienic containment technologies are lacking. Seeking conceptual innovation, we ask, how do social relations shape containment efforts as technologies are (re)invented? Whose bodies, fluids, and sexual practices need to be contained, when, by whom, and for what purposes? How do pharmaceutical and surgical containment strategies discipline some bodies and not others?

Our comparative examination of two different contexts of sexual containment holds particular promise for advancing the sociology of containment. Sexual beliefs and conduct have long been interpreted and assessed differently depending on the gender, race or ethnicity, social class, age, and nationality of the sexual actors in question (Brandt 1987). Men, people of color (especially people of African descent), the economically disadvantaged, and individuals who experience or express same-sex desire have been stereotyped as sexually uncontrollable and in need of containment (Nathanson 1991; Roberts 1997; Seidman 2002; Tolman 1996)—though considerable license is granted to white, heterosexual, middle-class men—while children and younger teenagers are typically viewed (depending on their race or ethnicity) as innocent and inherently asexual (Levine 2002). Exactly who and what are contained by technologies such as circumcision and HPV vaccination may best be understood through an analysis sensitive to intersectionality (Collins 1990); conversely, interrogating the dynamics of containment technologies can illuminate the workings of intersecting social statuses. We are especially keen to include men’s bodies and experiences in intersectional analysis (which all too often considers only women) and to explore emergent sites of containment where the “double standard” is both a strategically deployed cultural resource and an ongoing social accomplishment.

(Re)Introducing the Technologies

In 2006, with much fanfare, Merck & Co. announced U.S. Food and Drug Administration (FDA) approval of Gardasil, the first vaccine for HPV. Another similar HPV vaccine, Cervarix by GlaxoSmithKline, is currently undergoing FDA review. Composed of over 100 strains, including
30 transmissible by sex, HPV is the most common STI in the world. It is also the key agent of infection in CC, now viewed as an STI rather than a typical cancer; however, not all HPV leads to CC (Koushik and Franco 2006). Globally, approximately 493,000 new cases of CC are diagnosed each year, representing 10 percent of all cancers in women (Koushik and Franco 2006). Over 80 percent of new cases occur in developing countries (Dailard 2006). In the United States, where screening is routine for most women, CC is relatively rare, yet morbidity and mortality from CC are higher among women of color and women from lower socioeconomic strata (Singh et al. 2004).

Gardasil prevents infections from HPV-16 and HPV-18, two strains that cause about 70 percent of CCs, as well as HPV-6 and HPV-11, which produce 90 percent of genital warts (Harper 2004; Harper et al. 2006). Although publicly framed by their manufacturers as vaccines against CC, Gardasil and Cervarix can also protect women and men against anal, penile, and throat cancers caused by HPV (and transmitted through sex with male or female partners; Kubba 2008; Nack 2008). Complication rates are low, under 2 percent in most studies, and side effects are generally minor, although more than 7,000 “adverse events” have been reported and safety remains a concern of many who oppose mandating widespread vaccination (CNN 2008; Wheeler 2007). As we have demonstrated elsewhere (Casper and Carpenter 2008), the HPV vaccine has shifted health care politics and sexual politics, and controversy surrounds its continued use.

The HPV vaccine is a profitable pharmaceutical commodity with a distinctive biography and life course. Where Van der Geest, Whyte, and Hardon (1996) see pharmaceutical biographies as unfolding in the context of politics, in our view politics is not merely context. Rather, at every stage of their life courses—production, marketing, distribution, prescription, use, and efficacy—pharmaceuticals may influence politics and social relations, which in turn may (re)shape the technology itself. Drugs can instigate political struggles, and potentially social change, over time; for example, the birth control pill (Watkins 1998), Viagra (Loe 2004), and now the HPV vaccine (Casper and Carpenter 2008) embody social conflicts and shifting cultural values. As a containment technology targeting disease circulation among human beings, the vaccine evokes acute and longstanding politics of risk, danger, and bodily vulnerability.

Male circumcision is not a pharmaceutical vaccine but a surgical procedure for removing part or all the foreskin of the penis. Yet circumcision has served as a technology of containment in the United States since its medicalization in the late nineteenth century (Carpenter, forthcoming). By the 1940s, about 60 percent of U.S. males were circumcised in infancy.
(Laumann, Masi, and Zuckerman 1997). Supported by medical professionals and the for-profit insurance system, infant circumcision grew in popularity until about 1970, when rates exceeded 90 percent, largely because of its purported ability to prevent STIs and “unhygienic” germs (it was widely, if erroneously, believed that intact penises are difficult to clean); circumcision also became a typical therapy for phimosis (unretractable foreskin). However, evidence that circumcision actually prevents STIs was, and is, mixed (Gollaher 2000).

In the 1970s, following a cost–benefit analysis, the American Academy of Pediatrics (AAP) declared circumcision to be medically unnecessary. This move, representing a general decline in medical support—along with grassroots anticircumcision activism (on grounds including painfulness, human rights, and informed consent), the natural childbirth movement, cost-cutting measures by health insurers, and immigration from locales where circumcision is rare—resulted in much lower rates of circumcision, about 65 percent by 1999 (Darby 2005; Gollaher 2000). Since 1989, largely prompted by a vocal coterie of procircumcision physician–researchers, AAP has recognized “potential medical benefits” (chiefly the containment of urinary tract infections and penile cancer, which is exceedingly rare) but declined to recommend routine circumcision. Complication rates of infant circumcision in the United States are generally thought to be low, about 1 in 1,000. In short, use of circumcision for disease containment is contested, both within and outside the U.S. medical community; each “new” use of circumcision comes into already existing contexts of dissent.

Circumcision has recently been positioned as a potentially effective intervention against HIV/AIDS following clinical trials conducted in sub-Saharan Africa, where HIV is contracted primarily via heterosexual vaginal intercourse. Trials there found that circumcision of adult men reduces female-to-male HIV transmission rates by 30 percent to 50 percent (Auvert et al. 2005; Talbott 2007). Male circumcision has not proven effective in protecting women from heterosexually transmitted HIV infection, however (Altman 2008). About 62 percent of adult men in Africa are circumcised, with rates varying widely by region and ethnic group (e.g., nearly universal among African Muslims but anathema among ethnic groups that view intact foreskins as a sign of cultural distinction). In southern Africa, where rates of HIV are highest, fewer than 20 percent of men are circumcised (see http://www3.niaid.nih.gov/news/QA/AMC12_QA.htm). Across Africa, complication rates of circumcision are high—ranging from 18 percent in public clinics to 35 percent among traditional practitioners—because of poor training and inadequate and/or unsanitary equipment (MacInnis 2008).
The HIV/AIDS epidemic is less severe in the United States but still of great concern, given an infection rate of 13.7 per 100,000 population, with the highest rates among Blacks and Hispanics (54.1 and 18.0, respectively; Centers for Disease Control and Prevention [CDC] 2007). Of U.S. men diagnosed with AIDS in 2006, 72 percent contracted the disease through male-to-male sexual contact and 9 percent through injection drug use; of women diagnosed in the same period, 20 percent contracted AIDS through injection drug use and 80 percent through heterosexual contact (CDC 2009). Just over 9,000 of the nearly one million U.S. citizens with AIDS as of 2007 were younger than 13 at diagnosis, suggesting that preventive intervention in or before early adolescence could be effective (CDC 2009). Since 2007, prompted by the African clinical trials, AAP has been reevaluating its position on infant circumcision (Konrad 2007), while the CDC is considering policies for infants and adults (Rabin 2009). Insofar as the vast majority of U.S. adult males are circumcised, “For now, the focus of public officials in this country appears to be on making recommendations for newborns” (Rabin 2009).

Although not a pharmaceutical, circumcision works like a relatively inefficient vaccine with respect to HIV. Virtually every vaccine fails to protect some of the people who receive it. However, vaccines recommended by the U.S. Advisory Committee on Immunization Practices (ACIP; e.g., for polio, chicken pox) produce immune responses in 90 percent to 98 percent of individuals who receive them. If circumcision were a vaccine, the comparable figure based on the African trials would be 30 percent to 50 percent. Both HPV vaccination and circumcision, then, are preventive technologies inscribed in the body, with delayed benefits presumed to accrue long after the procedures themselves. Both operate according to principles of herd immunity; that is, performing the procedure on a certain proportion of people—typically about 70 percent—greatly reduces a disease’s chances of spreading (Colgrove 2006). The HPV vaccine and male circumcision are also similar in that they require individuals to assume embodied risks for later, perhaps invisible personal and collective benefits, something people in general dislike doing—although parents are more apt to consent to risks on behalf of their children for the sake of prevention (Colgrove 2006) and may even choose procedures for their children that they would not choose for themselves.3 To the extent that both technologies are supported, recommended, and even mandated by governments (and allied institutions), they represent biopolitical solutions to contemporary public health quandaries.
TABLE 1: Data Sources

<table>
<thead>
<tr>
<th>Category</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical associations</td>
<td>American Academy of Pediatrics, American College of Obstetrics and Gynecology, American Medical Association, American Medical Women's Association, American Public Health Association</td>
</tr>
<tr>
<td>Grassroots and health advocacy</td>
<td>National Organization of Circumcision Information and Resource Centers, Circumcision Information and Research Pages, Attorneys for the Rights of the Child, Alliance for Cervical Cancer Prevention, National Cervical Cancer Coalition, Alan Guttmacher Institute, PATH, Planned Parenthood</td>
</tr>
<tr>
<td>Public health organizations and figures</td>
<td>Centers for Disease Control, World Health Organization, UNAIDS</td>
</tr>
<tr>
<td>Government documents and Web sites</td>
<td>National Cancer Institute, U.S. Food and Drug Administration, U.S. Department of Health and Human Services</td>
</tr>
<tr>
<td>Conferences</td>
<td>Gardasil in Our Schools: Should States Mandate the HPV Vaccine for Their Students? symposium, February 2008, Vanderbilt University, USA; International Symposium on Genital Integrity, September 2008, Keele University, UK</td>
</tr>
<tr>
<td>News media</td>
<td>New York Times and Washington Post (all items addressing HIV and male circumcision, 2005–8), selected other newspapers and magazines (2005–8)</td>
</tr>
<tr>
<td>Pharmaceutical actors</td>
<td>GlaxoSmithKline, Merck &amp; Co.</td>
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METHODS AND DATA

Our project employs a multisited ethnography approach (Marcus 1995; Rapp 1999), in which multiple sites, sources, actors, and contexts are simultaneously explored until theoretical saturation is achieved. Our data sources, listed in Table 1, include primary and secondary literatures in science, medicine, and public health; print and Internet materials produced by major medical associations (e.g., Web sites, press releases, policy statements), grassroots groups, and health advocacy organizations; formal and informal interviews with key biomedical, public health, and activist figures; participant observation at scientific, clinical, and activist conferences; news media coverage; materials produced by pharmaceutical actors; and government documents and Web sites.
We analyzed these data using modified grounded theory (Charmaz 2006), which builds original theoretical arguments from data, as Glaser and Strauss (1967) recommended, but acknowledges that all data and analysts are already situated within social and cultural contexts. Critical to grounded theory methodology is the constant comparative technique through which data are coded, conceptualized, and categorized based on meanings. Analysis proceeds iteratively, moving from simple codes through complex categories that form the basis for theory. From the universe of data collected for our broader project on the politics of HPV, key sources for the current article emerged through comparison of categories specifically related to HPV and circumcision. Documents and sources that explicitly addressed links between HPV and circumcision were prioritized for closer analysis in favor of sources that did not. News media and reports of scientific studies and clinical trials were especially helpful in this regard.

In addition, we also undertook content analysis of key texts and documents, including a detailed analysis of every item (news report, letter to the editor, and editorial) published from 2005 to 2008 in the New York Times and Washington Post that addressed both HIV and circumcision. Following Altheide’s (1996) recommendations for such texts, we have combined the techniques of traditional enumerative content analysis, whereby the researcher ensures a systematic investigation by recording the frequency of items in which salient topics appear, with ethnographic techniques that enable the researcher to interpret and explore the subtle meanings of texts in context.

RESPONSES TO THE HPV VACCINE

The HPV vaccine emerged into a dynamic set of cultural conflicts, embodied health movements, and sexual politics. Clinical trials indicate that Merck’s Gardasil may prevent up to 70 percent of CCs and that GlaxoSmithKline’s Cervarix may also protect against HPV-45 and HPV-31, the third and fourth most common strains (Harper et al. 2006). Although these strains of HPV also cause anal, penile, and throat cancers—in men as well as women—Merck focused on CC, thereby deflecting attention away from the sexual nature of HPV and from same-sex transmission vectors and reinforcing the widespread tendency to treat sexual health as a women’s issue (Berer 2008; Kubba 2008; Nack 2008). Despite the herd immunity rationale behind vaccination, clinical trials in boys (approximately half the population) did not occur at first. By September 2009, when the FDA
Advisory Panel approved Gardasil for use in boys and men ages 9 to 26 (see http://www.webmd.com/sexual-conditions/hpv-genital-warts/news/20090909/fda-panel-oks-gardasil-for-boys), the HPV vaccine had already been “feminized” in the scientific literature and news media.

Shortly after FDA approved Gardasil in 2006, ACIP provisionally recommended the vaccine for all girls 11 to 12, and the CDC added it to the Child and Adolescent Vaccination Schedule (http://www.cdc.gov/nip/acip/). Leading medical associations such as the American College of Obstetricians and Gynecologists endorsed the recommendations—although some practitioners oppose widespread vaccination until long-term safety and efficacy are more definitively demonstrated. Sawaya and Smith-McCune (2007, 1991) assert, “While the trials are ongoing, mandatory vaccination is premature.”

Merck accompanied Gardasil’s 2006 release with a massive public relations campaign including highly visible television and print ads. Campaign materials variously proclaimed, “Roll up your sleeves. It’s your turn to help guard against cervical cancer” and “The power to prevent cervical cancer is in your hands. And on your daughter’s arm.” Even if this costly campaign failed to educate about HPV vaccination (including its risks), it likely ensured that people heard about the new technology simultaneous to it becoming available in clinics. News of the vaccine spread like wildfire, its arrival announced with exultant headlines such as, “First-ever cancer vaccine approved.”

Yet almost immediately, and in contrast to the circumcision stories analyzed below, media coverage of the HPV vaccine began to focus on the putative dangers to (and from) young women’s sexuality. The vaccine is aimed at preadolescent and adolescent girls, with a recommended target age of 10 to 12, because Merck’s trials found a stronger immunological response in girls 10 to 15 than in women 16 to 23 and because few girls begin sexual activity, and thus exposure to HPV, before those ages (Ault and Future II Study Group 2007). Numerous media sources, extrapolating from comments issued by the conservative organization Focus on the Family in 2005, began labeling the new technology the “promiscuity vaccine,” in reference to its imagined capacity to encourage young women to engage in sexual activity. To those who fear that the HPV vaccine will contaminate “innocent” young people by exposing them to sexual knowledge, the technology backfires, containing HPV and CC only at the price of activating the more frightening scourge of adolescent sexual activity.

Cultural assumptions about youth and gender suggest that (some) young women (white, middle-class, heterosexual, without disabilities) are to be
protected, while young men are largely expected, if not outright encouraged, to exercise their sexuality. As feminist scholars have long argued, prophylactic interventions related to sex—and sexual health—disproportionately target young women, in part because women’s potential for pregnancy makes their role in reproduction more obvious and more salient (Berer 2008; Nack 2008). Although U.S. moral conservatives decry adolescent sexual activity in general, their efforts more frequently target girls. Calls to extend HPV vaccination efforts to boys have been rare in the United States (though they have been common in Canada and, to a lesser extent, Great Britain; Kubba 2008). Targeting girls not only amplifies extant concerns about their burgeoning and putatively dangerous sexuality but also brings parents and physicians into the mix.

Variation in state-level vaccination laws complicates matters further. School-based vaccination has historically been an effective means of ensuring rapid and widespread use of childhood or adolescent vaccines (Colgrove 2006). Laws requiring vaccination are especially beneficial to low-income children, who are covered by government programs that pay for vaccines. By late 2007, 24 states and Washington, D.C., had introduced legislation to mandate HPV vaccination for girls entering public schools. These efforts were forcefully resisted by conservatives, who argued, just as they did regarding the Plan B contraceptive, that vaccination “sends the wrong message” and that requiring it violates parental rights. In May 2007, just months after Texas became the first state to mandate HPV vaccination for all sixth-grade girls (with some exceptions), via a gubernatorial executive order, Texas legislators—largely prompted by vocal opposition from moral conservatives and parents who oppose vaccination in general—passed a bill overriding the mandate (Associated Press 2007). Legislators in California and Maryland withdrew their bills (only D.C.’s was enacted), and Virginia lawmakers, despite passing a school vaccine requirement in 2007, were by late 2008 considering a bill to delay that requirement (National Conference of State Legislatures [NCSL] 2009).

These developments outraged many progressives. The National Organization for Women’s Kim Gandy stated, “I have no doubt that right-wing organizations will lobby. . . . They’ve clearly shown that they are more concerned with women’s chastity than their health” (Richert 2005). Lawmakers in many states have regrouped, finding success with nonmandatory measures. Since 2006, New Hampshire has provided over 14,000 doses of the vaccine at no cost to girls younger than 18, as has South Dakota since 2007; and Washington State’s legislature approved $10 million to voluntarily vaccinate 94,000 girls by 2009 (NCSL 2009).
RESPONSES TO CIRCUMCISION AS HIV PREVENTIVE

Circumcision as HIV preventive entered ongoing debates about HIV/AIDS, genital cutting, masculinity, religion, and sexuality. Early in the HIV/AIDS epidemic in Africa, researchers observed lower rates of HIV infection among men who were circumcised compared with men who were not (Marx 1989). Although circumcision is associated with social factors, such as Islamic beliefs, that encourage relatively conservative sexual behavior, thereby reducing the likelihood of HIV transmission, the density of HIV-receptive Langerhans cells on the foreskin’s inner surface provided a biologically plausible explanation for the proposed HIV–circumcision link (New York Times, July 11, 2000). Randomized clinical trials of circumcision began in Uganda, South Africa, and Kenya in the early 2000s and, by 2005, were finding HIV rates 50 percent to 60 percent lower among men in the circumcision groups than men in the control groups (Auvert et al. 2005). Some later analyses found smaller reductions in HIV transmission (Talbott 2007) as well as significant levels of nonsexual transmission (i.e., from contaminated instruments; Brewer et al. 2007).

With no AIDS cure in sight and progress stalled on an HIV vaccine, the international public health community greeted the circumcision studies with cautious optimism. At the 2006 International Conference on AIDS, advocates argued that “new HIV infections in men could be substantially reduced and millions of lives saved if [circumcision] were to be introduced” (British Medical Journal [BMJ] 2006, vol. 333, 409). Yet skeptics cautioned that men who believed themselves fully protected by circumcision might engage in riskier behavior (the disinhibition thesis), stressed the difficulties of generalizing outside African contexts, given regional variations in HIV strains and transmission patterns (primarily via vaginal intercourse in Africa), and emphasized the need to place circumcision in a comprehensive anti-HIV strategy.

Despite initially “refus[ing] to endorse [circumcision] as a prevention tool until more evidence is produced” (BMJ 2006, vol. 333), by March 2007, WHO and UNAIDS were urging countries with high heterosexually transmitted HIV rates and low circumcision rates to recognize adult male circumcision as “an additional important intervention [in a comprehensive package] to reduce the risk of heterosexually acquired HIV infection in men,” provided adequate medical safeguards were available (e.g., availability of sterilized instruments; WHO/UNAIDS 2007). Some experts welcomed circumcision as a sexual health intervention that, by targeting men, shifts some of the burden of sexual health from women, even as they
continued to worry that, because circumcision is not 100 percent protective, women remain exposed to risk (Berer 2007; Sawires et al. 2007).

When considering how the African findings might translate to the United States, many in the public health and medical communities expressed a similar mixture of optimism and caution. National Institute of Allergy and Infectious Diseases director Anthony Fauci declared that circumcising adult men “could be an important addition to . . . HIV prevention” while noting that “it is not completely protective and must be seen as a powerful addition to . . . other HIV prevention methods” (BMJ 2007, vol. 334, 11). Other medical professionals contended that recommending circumcision in the United States was premature, given “the many differences between the underlying HIV epidemics in Africa and the U.S.” and lacking evidence that circumcision can prevent HIV transmission between men (a major vector in the United States; Sullivan et al. 2007, e223).

Some U.S. experts were more enthusiastic about circumcision. In 2005, King Holmes, a University of Washington–based STI scholar, said, “It’s essentially an anatomic vaccine for life” (Science 2005, vol. 309, 860, emphasis added). In April 2007, New York City Health Commissioner Thomas Frieden (who became CDC director in May 2009) was reported as having “suggested circumcision could hold preventative promise here, despite differences between the two at-risk populations [U.S. and African]” (USA Today, April 7, 2007). Many news reports gave the impression that Frieden was actively promoting circumcision, but he averred that “the New York City Health Department has not planned, developed or announced a campaign to encourage at-risk men to get circumcised. . . . [W]e are encouraging people to discuss and study this issue” (New York Times, April 12, 2007). Frieden further noted, “A campaign to promote circumcision in this country would be premature without stronger evidence.” His recommendation for dialogue met with a lukewarm reception. Despite “express[ing] support for seeking new ways to combat the disease,” Mayor Michael Bloomberg “was unconvinced that government should be involved in promoting or providing circumcisions” (New York Times, April 6, 2007).

Some HIV/AIDS activists “doubted that encouraging circumcisions would significantly decrease infection rates” (USA Today, April 7, 2007). The Community HIV/AIDS Mobilization Project’s Julie Davids noted, “The U.S. has a healthy [i.e., high] HIV epidemic and high rates of circumcision” (BMJ 2007, vol. 334, 11). Others, like Peter Staley, cofounder of ACT-UP New York, expressed concern about local or regional variation even as they longed for reduced infection rates: “Should we proceed when
we don’t have hard data yet on the population here? . . . On the other hand, if we wait the three years it would take to answer that question, how many will be infected in the meantime?” (USA Today, April 7, 2007). Mark McLaurin, executive director of New York State Black Gay Network, reported hearing from men who “wanted to make sure that [circumcision] wasn’t going to be mandatory” and speculated (based on low uptake for HIV vaccination trials) that it would be difficult to recruit Black and Latino men for circumcision “because of everything from Tuskegee on up” (New York Times, April 15, 2007). Sawires et al. (2007, 711) emphasize “avoiding branding men as perpetrators of infection,” especially African men, who are often painted with negative sexual stereotypes.

In June 2007, pursuant to the African trials and lobbying by longtime proponents of circumcision within the medical community, AAP quietly began reviewing its 1999 policy that circumcision has “potential medical benefits” that “are not sufficient to recommend routine neonatal circumcision” (Konrad 2007).4 Notably, this policy would apply only to infants, not adult men. The new policy, expected in early 2008, had not been released as of September 2009, suggesting possible internal conflict or uncertainty about the right course of action. However, in August 2009, AAP consultant Dr. Michael Brady predicted the adoption of “a more encouraging policy” that “stop[s] short of recommending routine surgery” (Rabin 2009).

Also in spring 2007, the CDC began “consult[ing] with external experts to receive input on the potential value, risks, and feasibility of circumcision as an HIV prevention intervention in the United States and to discuss considerations for the possible development of guidelines” (CDC 2008). By August 2009, CDC had not taken an official position but was (newly under Frieden’s direction) “considering promoting routine circumcision for all baby boys born in the United States” as well as “whether the surgery should be offered to adult heterosexual men whose sexual practices put them at high risk of infection” (Rabin 2009). Although the CDC’s Web site contains numerous links to references and material on circumcision as possible HIV-preventive, its fact sheet on circumcision stresses that

individual men [who] wish to consider circumcision as an additional HIV prevention measure . . . must recognize that circumcision 1) does carry risks and costs . . . in addition to potential benefits; 2) has only proven effective in reducing the risk of infection through insertive vaginal sex; and 3) confers only partial protection and should be considered only in conjunction with other proven prevention measures [e.g., monogamy, condom use]
Anticircumcision activists responded to these developments by emphasizing that circumcision offers limited protection, causes complications, and is not cost effective. For example, a 2005 brochure from the National Organization of Circumcision Information and Resource Centers (NOCIRC) noted that “both circumcised and intact males contracted HIV during the course of the [African] studies” and described circumcision as “less effective, more risky, and more expensive than . . . aggressive educational approaches that discuss . . . the importance of safe sex and condom use.” Activists have also stressed disinhibition—“Promoting circumcision to protect against HIV could provide a false sense of safety, putting sexually active males and their partners at increased risk”—and human rights grounds for opposing circumcision: “There is a very real risk that . . . encouraging adults into circumcision will . . . lead to forcible circumcision of infants and children, who are unable to consent to surgery” (NOCIRC 2005). J. Steven Svoboda of Attorneys for the Rights of the Child has specifically critiqued “powerful international agencies” for “promoting circumcision as a vaccine” against HIV and argued that vaccines for diseases that are largely sexually transmitted (e.g., Hepatitis B vaccine) should not be given in infancy but when children are older (and risks are more immanent; author’s field notes from the International Symposium on Genital Integrity 2008). Circumcision foes have also critiqued the African trials on scientific grounds (e.g., “all three studies were halted early [because HIV infection rates were so much lower among men in the circumcision groups than in the control groups] so there is no way to assess whether the preliminary reduced-transmission rate would persist if the study had continued to run the designed length”; NOCIRC 2005). Implications of targeting African bodies have not eluded activists: “Are poorer African men more expendable to such research and easier to coerce into needless surgery? This can easily be viewed as a colonial undercurrent” (Ferris n.d.).

For the most part, U.S. news media have reported findings of the African clinical trials with more enthusiasm than critique. Many reports framed circumcision as a near magic bullet in the fight against HIV in Africa:

A series of studies have shown that circumcised men are at least 60 percent less likely to contract HIV. Far less clear is how meager public health systems already overwhelmed by the AIDS epidemic can offer the procedure widely enough to slow the epidemic’s ruinous spread. (Washington Post, October 21, 2007)

Few (3 of 48) of the news items addressing both circumcision and HIV mentioned the possibility that different HIV transmission patterns might
limit the applicability of African study findings to the United States or took note of decades-long opposition to routine circumcision on grounds such as human rights and informed consent ethics (5 of 48). Of the 9 news items (18.8 percent of sample) mentioning concerns that African men might engage in “risky” behavior believing themselves to be protected by circumcision, none extended such arguments to circumcised boys (or men) in the United States.

Most major papers published editorials and letters to the editor calling for the expansion of circumcision to combat HIV. Some of these items specified the African context, but many were vague about location—and age of the targeted males—leaving readers to interpret. One New York Times editorial implied the widest possible scope of intervention:

For years, the holy grail of AIDS prevention has been a vaccine, even one that is only 50 to 60 percent effective. A real vaccine is years away. But as of yesterday, we know its near equivalent exists. International donors and governments should join together to spread the good news about circumcision and make the procedure available everywhere. (December 14, 2006, emphasis added)

This item reflects the tendency of U.S. news coverage of circumcision: using HIV links to compare circumcision favorably to vaccination. Of 48 news items, 6 (4 articles, 1 editorial, 1 letter) included language analogizing circumcision to a vaccine (e.g., “If an AIDS vaccine were suddenly discovered that could prevent 7 out of 10 new infections, the world would be rejoicing”; New York Times, October 15, 2005), and 2 letters were published under the headline, “A Real-World AIDS Vaccine?” (New York Times, January 28, 2007). One article and two letters instead argued, “Circumcision shouldn’t be confused with an honest vaccine” (New York Times, December 16, 2006).5

**JUXTAPOSITIONS OF CIRCUMCISION AS HIV PREVENTIVE AND THE HPV VACCINE**

Despite similarities between circumcision as HIV preventive and HPV vaccination as containment technologies and links made in clinical studies, they are seldom explicitly juxtaposed in public discourse. Several sites of coappearance are therefore worth exploring: international public health discourse, medical research, news coverage, and the anticircumcision activist community.6 Even when the technologies are mentioned together,
direct links between them (e.g., conceptual, strategic, clinical) are seldom explored. We suggest here that cultural ideas about gender pervade discussions of each technology, linking them ideologically even where specific clinical and/or physiological links may not be obvious. Likewise, interpretation of clinical data on overlaps between male circumcision and the HPV vaccine relies on ideas about gender without naming these.

Juxtaposition of the technologies in international public health discourse is exemplified by UNAIDS executive director Peter Piot’s 2007 speech to the 17th annual meeting of the International Society for Sexually Transmitted Diseases Research. Piot described “the feminization of the HIV epidemic and . . . burden of STIs on women,” including HPV and cervical cancer, as the “most important” epidemiologic trend in STIs; called the HPV vaccine “an exciting development from which we will be able to learn a lot . . . if and when we have an HIV vaccine”; and noted that “HIV changes the natural history and pattern of STIs,” including HPV, by affecting immune suppression (on HIV-HPV links unrelated to circumcision, see Carpenter and Casper 2009). Where Piot did invoke male circumcision, it was to express concern that increasing focus on circumcision is crowding out proven behavioral prevention efforts:

When I was in South Africa . . . at the national AIDS conference . . . all the discussions were on male circumcision and on microbicides. . . . There was hardly any discussion about how we can make sure that people today have access to what we know is working [male and female condoms, behavioral interventions]. I think that is a very, very dangerous trend.

The Bill and Melinda Gates Foundation’s support for global health initiatives likewise encompasses circumcision against HIV and HPV vaccination without explicitly citing linkages. A major player in global health since its founding in 1994, the Gates Foundation focuses on HIV/AIDS, vaccine-preventable diseases (including HPV), malaria, tuberculosis, and maternal and child health (http://www.gatesfoundation.org). Through its emphasis on supporting “organizations around the world that are using innovative [often technological] methods to improve health in developing countries,” the Gates Foundation connects HPV vaccine and circumcision. Since 1999, it has donated millions of dollars annually to the Alliance for Cervical Cancer Prevention (ACCP) and its member organizations; among other global efforts, ACCP supports research, dissemination, and clinical practices related to the HPV vaccine.

The foundation’s Web pages on HIV/AIDS prevention do not mention circumcision as HIV preventive, although they note that, given limitations
of existing approaches, “the development of a vaccine and other new prevention options is critical for successfully fighting the epidemic, especially in developing countries.” The foundation funds research on vaccines, microbicides, and other preventive pharmaceuticals. Web site lacunae notwithstanding, the Gates Foundation has heavily funded organizations that promote circumcision against HIV, including UNAIDS and the Global Fund to Fight AIDS, Tuberculosis and Malaria, which chiefly support global and local efforts to increase access to antiretroviral therapies, HIV testing, and behavior modification programs (http://www.theglobalfund.org/en/). Since 2002, the foundation has provided over $8 million to fund clinical trials of circumcision in Uganda, $1.7 million to the International Center for Journalists to “develop high-impact fellowships in Africa focusing on health issues—including male circumcision and clinical trials,” and $494,474 to UNAIDS to “engage[e] key stakeholders in a dialogue about male circumcision.” In September 2007, the Gates Foundation was reported as “expressing interest in helping expand circumcision services in Africa,” although “no final decisions” had been made at that time (Washington Post, September 7, 2007).

Immediately prior to the 2006 World Conference on AIDS, Richard Feachem, executive director of the Global Fund, was reported as having said research revealing the protective effect of circumcision against HIV was set to change parental expectations and medical practice across the world. Instead of viewing the operation as an assault on the male sex, it was increasingly being seen as a lifesaving procedure which every parent would want for their sons. (Laurance 2006, 15)

By early 2007, the Global Fund (along with UNAIDS) had “indicated that they will be willing to pay for circumcisions if countries ask for money and can demonstrate that the operations will be done safely and with the right counseling” (New York Times, March 29, 2007).

Medical researchers made a more direct connection in March 2009, when New England Journal of Medicine (NEJM) published a study finding lower rates of HPV infection among circumcised men. Based on clinical trial data from Uganda, authors Tobian et al. (2009, 1308) estimated that circumcision reduces transmission of cancer-causing HPV strains by 35 percent (and herpes [HSV-2] transmission by 25 percent). Despite noting that reduced HPV rates could result, in part, from the virus naturally clearing over the study period, the authors proposed that “these benefits should guide public health policies for neonatal, adolescent, and adult male circumcision programs” without specifying where. According
to the *New York Times*, coauthor Ron Gray said, “There is no reason to believe that this is in any way unique to Africa” (Bakalar 2009).

Few overt comparisons of the two technologies appeared in print news media, before or after the *NEJM* article. The only example in our sample (through 2008) of 30 articles, 7 editorials, and 11 letters to the editor is a letter published on December 30, 2006, in the *Washington Post*. Wrote Lynne Leonard,

> When a vaccine is introduced that can prevent the most common types of [HPV] . . . a hoopla ensues because of fear that this vaccine will promote promiscuity in girls [Health, November 7]. But when circumcision is promoted in boys because the risk of HIV infection is shown to be cut by half [front page, December 14], nary a word is said about promoting promiscuity in boys. The double standard is alive and well.

Letters to the editor are one means that the public uses to correct and protest depiction of issues in the news media (Wahl-Jorgensen 2007). Strikingly, only 1 of the 48 items addressing circumcision–HIV links before March 2009 mentions the HPV vaccine, much less posits any similarity between these technologies. The *New York Times* and *Washington Post* each published one story about the *NEJM* study; neither prompted letters to the editor or further news coverage.

The anticircumcision activist community has also juxtaposed circumcision as HIV preventive and the HPV vaccine. Many participants at the 2008 International Symposium on Genital Integrity, cosponsored by NOCIRC and NORM-UK, argued that circumcision for HIV prevention should be chosen only voluntarily by adult men and can wait until just before men become sexually active, a position consistent with that of activists who propose delaying the HPV vaccine until girls are “older” (i.e., legally capable of consent) and/or sexually active. In informal conversations with author Carpenter, several conference participants explicitly juxtaposed the two technologies, proposing that both could wait until sexual initiation was imminent (albeit arguing that circumcision was never advisable, whereas the HPV vaccine might be). Historically, anticircumcision activists have forcefully countered claims that circumcision protects against HPV/CC. According to one Circumcision Information and Resource Pages fact sheet, “Male circumcision has never been proved to offer any real protection against HPV infection in the female partner, but even if it did, it still would not be necessary because the vaccine will offer protection.” Responses to the 2009 *NEJM* study have taken a similar tack: “Why would we entertain the notion that circumcision might reduce the
DISCUSSION AND CONCLUSION

By juxtaposing HPV vaccination and circumcision as HIV preventive, our analysis makes several contributions to research on gender, sexuality, disease, and public health. We broaden and deepen arguments about containment by examining the public health principles and meanings surrounding the HPV vaccine and circumcision. The “dream of hygienic containment” (Bashford and Hooker 2001) is alive and well in these overlapping public health worlds, but ultimately it does not reflect the reality of what circumcision—or even HPV vaccination—can do. Beyond actual public health successes (and failures), provaccination and containment practices work to intensify extant structural relations, extending hierarchies and inequalities. Members of some groups—“fallen” women, racial or ethnic minorities, poor people, people in developing nations—are typically culturally positioned as unhygienic, with toxic bodies and transmissible “conditions,” and thus in need of containment. Pharmacological and surgical containment related to sexual health promises to discipline the bodies of some to ensure immunity for all. With no end to cancer or HIV/AIDS in sight, this kind of biopolitical symbolism is powerful and may encourage discriminatory action.

The sexually transmitted nature of HPV/CC and HIV/AIDS affects responses to the vaccine and circumcision in two ways. First, although HIV can be contracted through injection drug use and other nonsexual means (although chief infection vectors in the United States are sexual), strains of HPV that cause CC are contracted only sexually (unlike strains that cause nongenital warts). The possibility of nonsexual transmission may deflect concerns about disinhibition among circumcised men, as when the (rare) possibility of nonsexual transmission of Hepatitis B helped to forestall serious opposition to efforts to mandate that vaccine (J. Colgrove, pers. comm., June 1, 2007). Thus, the effectiveness of containment metaphors and actual containment strategies may depend on how deeply they are shaped by gender, race, sexual politics, and notions of bodily transmission. What kinds of fluids and organisms matter as much as which bodies are engaged in “risky” practices. Comparing the “feminized” HPV vaccine to male circumcision brings men’s bodies and health into the intersectional mix.

Of course, sexual transmission of disease raises the specter of sexual activity, especially among teenagers and/or outside of marriage, which is
generally interpreted quite differently for men and women in most cultural contexts. Our comparative analysis demonstrates how responses to these two technologies have been powerfully shaped by intersections among gender, sexuality, age, race, and nationality. Attempts to market and mandate the HPV vaccine activated concerns about female promiscuity, whereas talk of promoting circumcision as HIV preventive has not spurred similar concerns about males in the United States (while men in Africa are treated as suspect). Cultural constructions of gendered sexuality—casting girls and women as either innocent or fallen and boys and men as sexually driven (Nathanson 1991)—helped proposals to promote circumcision as HIV preventive to escape the association with promiscuity that has dogged HPV vaccine mandates. Proposals that boys should receive the HPV vaccine to prevent CC in their (ostensibly) female partners—a claim far more common in public discourse than claims about preventing penile and anal cancers in men—invoke (implicitly) feminist notions of “equal opportunity” (for risk and protection) as well as traditional understandings of men as women’s protectors. Conversely, risks and responsibility for circumcision are borne by men alone, and hoped-for benefits to women have not materialized (at least regarding HIV). In fact, men who believe themselves protected by circumcision may be less amenable to partners’ requests for safer sex practices. These phenomena reveal and sustain obdurate gender hierarchies.

Understandings of gender and sexuality also intersect with notions about age, race, and nationality. Although U.S. boys have historically been circumcised as infants, well before sexual maturity and activity, girls would be vaccinated as preteens on the verge of sexual maturity—a situation that many parents appear to deem far more threatening. Pervasive stereotypes of women and men of color—especially of African descent—as promiscuous not only may inhibit stakeholders’ ability to see them as deserving of, or able to benefit from, containment but also may prompt calls for containing them, as in proposals to target circumcision campaigns at “high-risk” men. Both HPV/CC and HIV/AIDS are more widespread and have considerably worse prognosis in the developing world than in the West. Ironically, circumcision is a routine U.S. practice that is now being exported to the developing world, whereas the HPV vaccine is desperately needed in the developing world but (potentially) being stalled by conservative opposition in the United States. By heeding feminist theorists’ call for attention to intersectionality, we offer a nuanced analysis of gendered technologies—for women and men—in transnational context.

Finally, our analysis reveals that the introduction and/or reframing of these containment technologies is changing cultural understandings of
gender, sexuality, race, age, and nationality. Most obviously, the HPV vaccine retrenches gender politics that position young girls simultaneously as sexually innocent (yet likely to fall) and sexually available. The vaccine’s use is, in fact, predicated on the eventual fact of girls’ sexual activity; conservative resistance to the vaccine rests on fears of adolescent female sexuality unleashed. Conversations about circumcision in the United States show no similar dynamics; indeed, in many instances boys and men are represented as somewhat inert but with the capability of infecting girls and women via heterosexual activity. On the other hand, African men, like gay men and men of African descent in the United States, are routinely framed as dangerously subject to disinhibition. Our analysis highlights the importance of considering how technologies like HPV vaccination and circumcision contribute to the ongoing construction of gender (including “good” and “bad” men and women), race, and sexuality. It is precisely at these intersections of bodies with technologies that the “double standard” is reproduced.

We began by asking why one of these technologies should be embroiled in controversy while the other is relatively free from public debate. We have shown how the politics of sexual health and use of new preventive technologies unfold in a specific cultural context in which containment of bodies, practices, and identities—matters. Intersections of gender (meaning women and men), sexuality, age, race, and nation are critical here. The double standard embodied in and achieved by juxtapositions of HPV vaccination and circumcision has a distinctly American feel while relying on stereotypes about African bodies, sexuality, and transmission. We suggest that technologies are caught up in, and indeed constitute, transnational circuits of power, risk, and prevention as these are enacted on human bodies. Meanings of gender and sexuality shift and change along with bodies and practices while simultaneously grounding the ways in which individuals and societies consider, use, and respond to technologies.

NOTES

1. About 2.5 million girls were vaccinated in Gardasil’s first year of availability in the United States (Paddock 2008).
2. Prior to being adopted by U.S. physicians, around 1870, as a measure for curing and preventing masturbation, cancer, and venereal disease, circumcision was almost exclusively a Jewish ritual practice in the United States (Glick 2006; Gollaher 2000).
4. Konrad’s article is one of the only news stories mentioning the American Academy of Pediatrics review; the organization did not publish a press release on its Web site.

5. However, even the highest estimates of circumcision’s effectiveness against HIV are far lower than typical vaccine failure rates of about 5 percent to 10 percent. By comparison, the HPV vaccine failure rate is nearly 0 percent among women never exposed to the virus (see http://www.merck.com/product/usa/pi_circulars/g/gardasil/gardasil_pi.pdf).

6. Two historical links between HPV/cervical cancer (CC) and circumcision are worth noting. In the 1950s, some researchers believed that women contracted CC by having vaginal sex with uncircumcised men who let smegma build up under their foreskins (McNeil 2006), a theory subsequently “disproved by high cancer rates among Muslim women, who had circumcised husbands, and by relatively low rates among Soviet Jewish women, who often did not.” In the 1980s, when low levels of virus in human warts stymied efforts to develop an HPV vaccine, U.S. researchers discovered that “grafting bits of foreskin collected from hospital circumcisions and infected with genital wart extract into mice” produced “cysts [containing] enough human virus to work with” (McNeil 2006).

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