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## Transformations in the Medicinalization of Sex: HIV Prevention between Discipline and Biopolitics

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## Transformations in the Medicalization of Sex: HIV Prevention between Discipline and Biopolitics

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*This article examines transformations in HIV prevention strategies from the 1980s to the present. Drawing on the concepts of medicalization (Conrad, 2007), discipline and biopolitics (Foucault, 1976/1988), and biomedicalization (Clarke, Fishman, Fosket, Mamo, & Shim, 2003), it explores the shift from behavioral to biomedical and surgical prevention techniques—a shift symbolic of a more general trend toward the biomedicalization of sexuality. It argues that, although biomedical and surgical approaches (chemoprevention and male circumcision) have certain benefits, their efficacy is limited and uncertain. They do not guarantee individual protection. The aim is no longer the modification of sexual behavior through disciplinary strategies aimed at the development of subjective and sexual awareness, but the modification of health behavior as a positive response to biomedical recommendations. Through the use of preventive or curative drugs, the same type of sexual awareness is seen as no longer required.*

In recent years, there has been a radical change in perspective from within the field of HIV prevention. This change is marked by a dramatic increase in biomedicalized approaches that utilize mass testing, drugs and pharmaceutical products for chemoprevention and treatment, as well as the surgical technique of male circumcision. These therapies are used in replacement of or in combination with behavioral preventive methods. In this article, we review the nature and characteristics of these recent changes and critically analyze the types of social and cultural meanings regarding sexuality that are involved, beyond the assumed attempt to reduce HIV incidence. This article is based on the idea that HIV prevention, be it behavioral or biomedical, represents one of the major forms of medicalization of sexuality in the 20th century (Gianni, 2011) and that current changes in preventative approaches also imply changes in sexual conduct and meanings and representations of sexuality that need to be carefully understood. It is also based on the idea that, beyond the recent dramatic changes, there is some continuity in the HIV prevention process. Whether these new HIV prevention strategies will contribute to the limitation and the reduction of

the HIV incidence rate is not the topic of this article; it is not a public health evaluation article (Coates, Richter, & Caceres, 2008) or a critique of the new arrangements in HIV prevention (Dowsett & Couch, 2007), but an attempt at understanding current processes and changes in the medicalization of sexuality.

The medicalization of sexuality has already been the subject of numerous studies inspired by the concepts of Zola and Conrad (Bayer, 1989; Hausman, 1995; Hirschauer, 1997; Marshall, 2002). Here, medicalization is considered to be the definition of a problem in medical terms, the use of medical terminology to describe it, the adoption of a medical conceptual framework to understand the problem, and the use of medical interventions to treat it (Conrad, 1992; Zola, 1972). In more recent work, Conrad (2005) developed the concept of the “shifting engines of medicalization” to promote a better understanding of the process of change from behavioral and psychosocial medicalization of sexuality (Tiefer, 1996) to approaches based on the use of biomedical and surgical methods. Conrad (2005) demonstrated how “the availability of new pharmaceutical and potential genetic treatments are increasingly drivers for new medical categories” (p. 3). Considering the increasing recourse to biomedical products in the management of everyday life, Clarke, Fishman, Fosket, Mamo, and Shim (2003) went beyond the notion of a “shift” and developed the concept of “biomedicalization” to understand the structural changes occurring in the medicalization process. In Clarke et al.’s (2003) view, “[T]he scope of the biomedicalization process is thus much broader and includes

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conceptual and clinical expansions through the commodification of health, the elaboration of risk and surveillance, and innovative clinical applications of drugs, diagnostic tests, and treatment procedures" (p. 165). The concept of biomedicalization helps to better understand the passage from the medicalization of some conditions to the medicalization of health and ordinary lifestyles. It is not only the creation of new medical categories that is at stake here, but the radical transformation of everyday life. In this perspective, *health*—defined by the World Health Organization (WHO; 1946) as "a state of complete physical, mental and social well-being and not merely the absence of disease" (p. 1)—appears as socially, economically, and technologically produced, far from being a natural state.

However, this new approach developed in terms of biomedicalization did not include HIV prevention and treatment in the scope of its analysis and in the application of this concept (Clarke, Mamo, Fosket, Fishman, & Shim, 2010). One of the objectives of this article was to demonstrate how HIV prevention falls into the realm of both medicalization and biomedicalization and how these two perspectives impact on the organization of sexual conduct. The analyses developed in this essay are also intended to allow a reconsideration of the question of medicalization of sexuality from a critical perspective, using the concepts of "discipline" and "biopolitics" of Michel Foucault:

*Discipline*, or techniques of power that were essentially centered on the individual body and *Biopolitics*, or technologies of power that are applied to man-as-species or to regulate entire populations—their mortality, morbidity, numbers, and movement.... Both technologies are obviously technologies of the body, but one is a technology in which the body is individualized as an organism endowed with capacities while the other is a technology in which bodies are replaced by general biological processes. (Foucault, 2003, p. 249)

Few works have attempted to link together critical approaches in terms of medicalization with the work of Foucault (Blake, 2003; Giami, 2005; Parker & Aggleton, 1999). The concept of biomedicalization (Clarke et al., 2003) represents the latest attempt to articulate Conrad's (1992) medicalization and Foucault's (1976/1988) discipline and biopolitics. These analyses should facilitate a better understanding of how the more recent biomedical approaches represent, at the same time, significant change and continuity with behavioral approaches and health promotion in the range of societal responses to HIV infection.<sup>1</sup>

<sup>1</sup>In a volume published in 1981 entitled *Management of Risk*, the French sociologist Robert Castel highlighted the continuity and complementary functions of mild psychotherapeutic approaches, brief therapy, psychoanalysis, and pharmacological inward psychiatric treatment as part of the same mental health apparatus, which can be seen as a preliminary apparatus of combined prevention and treatment.

## HIV Prevention as a Form of Medicalization and Biomedicalization of Sexuality

We are faced with a new situation in which there are new efficient drugs available and in which the potential exposure to the risk of HIV infection becomes a medical condition in itself, which can be treated medically with these new drugs. The exposure to the risk of HIV infection—whether situational or behavioral—becomes available to chemotherapy in replacement of (or in "combination" with) previous behavioral approaches. There is a shift from a situation in which behavioral modifications were the only possibility to prevent the occurrence of HIV infection toward a situation in which these behavioral modifications will no longer be necessary thanks to the use of pharmacological medication. This kind of transformation of therapeutic devices into prevention tools is not unique and specific to HIV/AIDS. Based on her work in the field of breast cancer prevention, Fosket (2010) developed the notion of "chemoprevention" in which risk of breast cancer is treated as a disease:

Chemoprevention is based on the concept that biologically active compounds can be administered not only as tumor-destroying chemotherapy but also as tumor-preventing chemotherapy.... Drugs developed as treatments for health problems given instead to healthy populations as a way to stay healthy highlight the intense biomedicalization of society such that technoscientific biomedical interventions are increasingly normalized as part of everyday life. (p. 340)

Fosket showed how chemoprevention, which remains controversial, is developed in combination with or in replacement of other, more traditional preventive approaches such as surveillance, self-examination, and early response, which are behavioral practices.

This approach developed in the field of cancer presents a strong analogy to understand the current situation and the dramatic changes occurring in the field of HIV/AIDS prevention. The concept of "pre-exposure prophylaxis" (PrEP), which refers to the act of using a drug designed for the treatment of HIV infection to prevent the occurrence of the infection, reflects this evolution. Risk exposure and risk behavior become conditions that can be—and need to be—biomedically treated using the same drugs that are used to treat patients who are already infected. However, these drugs do not have the function of treating these behaviors; they prevent the occurrence of some adverse potential consequences of such behaviors without the necessity of reducing or suppressing their occurrence (Nguyen, Bajos, Dubois-Arber, O'Malley, & Pirkle, 2011). The treatment becomes prevention: "Treatment as prevention" (TasP) replaces the obligation to engage in sexual behavior change, which is now considered to have been a failure by most of the advocates of the biomedicalization of HIV prevention (Cohen, 2010).

### First Period: Prevention as Discipline (1981–2007)

Societal responses to HIV were initially grounded in the order of *discipline*—that is, the social control exercised over the body and subjectivities by the different “biopowers”: principally, medicine, education, public health, and health promotion. Discipline is a form of normalization of sexual conduct exercised by individuals who learn to develop a certain “governance” of themselves in the context of disciplinary institutions such as schools, hospitals, prisons, and the military. Individuals are, therefore, subjected to the governance of their own body, over which they exert their responsibility using the “behavioral techniques” that they learn (Foucault, 1977, 1999). Individuals must become able to abandon their “natural” or “spontaneous” behaviors and even the behaviors that are ingrained in their culture, as some of these behaviors expose them to risk, replacing them with behaviors guided by the imperatives of public health. The work of Foucault (2003) also clearly demonstrates how such disciplinary conducts are embedded in a continuum from morality to health.

### Sexual Behavior Change

The first period in the era of the fight against AIDS began “in the absence of vaccines or treatments.”<sup>2</sup> This phrase has endlessly been repeated, as a sort of incantation, at the beginning of many thousands of articles written on HIV prevention (Montaner, 2011). Researchers and public health professionals in the medical world seem to have felt obliged to justify and even excuse the fact that they had to resort to behavioral approaches during the long march for a “magic bullet” and, in particular, a vaccine that would enable a move away from the focusing of all efforts on changing sexual behavior—an approach that had been considered to have limited effectiveness (Cohen, 1994; Grinstead, 1995; Osborn, 1995). The principal preventive approaches developed over the course of this first period in the fight against AIDS were based on attempts to change behaviors, with the establishment of the social norm of safe sex and condom use as a means of protection against HIV. Although condom use was, during this time, the principal recommendation for HIV prevention, other behavioral recommendations were also proposed to those exposed to risk of infection by health authorities, other organizations in the fight against AIDS, and gay activist groups. These recommendations included a reduction in the number of partners, selection of partners: serosorting (Halperin, 2007; Wilson et al., 2010). From another perspective, strategies based on the development of premarital abstinence and marital fidelity have been developed

by programs influenced by religious ideologies, such as the U.S. President’s Emergency Plan for AIDS Relief launched during the G. W. Bush presidency in the United States (Herzog, 2008).

### New Meanings in Sexual Conduct

The prevention of the sexual transmission of HIV—considered here as a form of normative system—has led to the development of new meanings of sexuality in terms of risk of infection, risk behavior, safe and safer sex practices, at-risk groups, and so on. Societal responses to HIV infection have led to the reformulation of behaviors and sexual meanings in the field of health (Bajos et al., 2010). The cultural scenarios and interpersonal scripts of sexuality (Gagnon, 2000) have been radically reframed and placed under the dominance of health meaning. The title of a book published by the Swedish sociologist Benny Henriksson (1995), *Risk Factor Love*, illustrates the extent to which traditional meanings attached to sexuality—such as love—have been revisited and become reconstructed as health categories: Love, therefore, becomes a “risk factor.”

As another example of change of meaning, masturbation, historically considered a health risk since the beginning of the 18th century (making men deaf, idiots, impotent, or infertile), has become—in the wake of HIV—a sexual practice carrying minimal risk (Laqueur, 2003). Heterosexual penile–vaginal sexual practice, the most socially legitimate and widespread sexual practice in most human cultures (Ford & Beach, 1952), has, in turn, been reconsidered as an important sexual risk behavior. It is not only the so-called “promiscuous” aspects of heterosexual behavior, such as “infidelity” and “multipartnership,” that have been endorsed as risk behaviors, but the physiological penile–vaginal contact that was understood and conceptualized as a vector of HIV transmission. Penile–vaginal intercourse was constructed as a risk practice *per se*. A European epidemiological study followed up HIV serodiscordant heterosexual couples for six months in order to establish to what extent unprotected penile–vaginal sex would contribute to increased incidences of HIV infection (European Study Group, 1994).

Hence, both traditionally legitimate and stigmatized sexual practices have acquired radically new meanings under the influence of the new discourses developed in the context of HIV (Gagnon, 1988). This fits perfectly into the model proposed by Conrad (2007) as a process of medicalization in which problems and situations are constructed from a medical or health perspective, and where responses to these medically defined problems are of a psychosocial nature, both in the fields of health promotion and of public health. The absence of critical work relating to the medicalization of sexuality in a domain that exactly corresponds to Conrad’s (2007) criteria implicitly shows that there exist forms of

<sup>2</sup>This article does not discuss the risk of infection through blood (transfusions or needle sharing) or vertical (mother to child) transmission, which are subject to different preventive strategies.

medicalization of sexuality that are considered more “taken for granted” than others and that, as such, they were not even considered as forms of medicalization or critically discussed. These recommendations of behavioral changes based on change in meanings resulted from complex negotiations between biomedical knowledge and experiential knowledge acquired by AIDS and gay organizations (Halperin, 2007). The “discipline” model, therefore, positions itself squarely in a framework that links health objectives and the moralization of behaviors: Health behaviors are seen as close to moral conduct (Lupton, 1995) because they are based on the rational and informed choice taken by a rational individual concerned with the protection and enhancement of his or her health.

### **Second Period: Biopolitics (Since 2007)**

The second period in the history of the fight against AIDS is that of the development of the biopolitics posture (Foucault, 2004). This consists of a radical change in strategies of social control over the body. Here, the aim is no longer to develop individuals’ capacities for “self-governance” but, rather, the regulation of the movements and flux of populations. It is less the individual and his or her capacity for self-control over sexual drives and conduct that is the target, but the control of the organic body and the management of the masses and their sociodemographic equilibrium. The necessity of self-governance diminishes in the face of reinforced control over the organic body. Forms of external control over the consequences of behaviors are put in place, which make changes in sexual behavior less necessary. From this perspective, the biopolitics posture is based on the use of technological products. The work of Diane Binson and the group from the University of California, San Francisco illustrates the change in public health intervention (Binson, Pollack, Blairb, & Wood, 2010). After the attempt of closing the gay bathhouse (Bayer, 1989), “businesses with a primary purpose of providing opportunities for sexual encounters between men (e.g., bathhouses and sex clubs)” (Woods, Binson, Maynec, Gored, & Rebchook, 2001, p. 68) have become places for biomedical prevention of HIV/AIDS and health education, providing condoms and lubricants and also health education and HIV testing on site.

### **Some Recent Changes in HIV Prevention**

Three recent biomedical and surgical innovations represent the shift from the behavioral model to biomedicalization of HIV prevention: male circumcision and two types of chemoprevention, PrEP and TasP.

*Male circumcision in southern African countries.* The WHO/United Nations Program on HIV/AIDS

(UNAIDS; 2007) Technical Consultation on Male Circumcision and HIV Prevention, held in Montreux, Switzerland (March 6–8, 2007), resulted in a recommendation on the use of male circumcision for HIV prevention by the WHO/UNAIDS, which was presented as a significant step in the fight against HIV:

The research evidence that male circumcision is efficacious in reducing sexual transmission of HIV from women to men is compelling. The partial protective effect of male circumcision is remarkably consistent across the observational studies (ecological, cross-sectional and cohort) and the three randomized controlled trials conducted in diverse settings. The three randomized controlled trials showed that male circumcision performed by well-trained medical professionals was safe, and reduced the risk of acquiring HIV infection by approximately 60%. The efficacy of male circumcision in reducing female to male transmission of HIV has been proven beyond reasonable doubt. This is an important landmark in the history of HIV prevention. (p. 3)

Large-scale, randomized, clinical trials are now underway in a number of countries in Southern Africa (Weiss, Dickson, Agot, & Hanks, 2010). The first results of controlled trials carried out on a population scale seem to fulfill the hope raised by the first trials, confirming the evidence of a significant reduction of the incidence of HIV infection among newly circumcised men (Auvert et al., 2011).

*PrEP for HIV prevention.* A series of clinical trials testing the efficacy of pre-exposure chemoprophylaxis for HIV prevention (PrEP) have begun in several countries among HIV-negative men who have sex with men (MSM; the Iprex project), and have shown promising preliminary results, which should enable a prescription medication (Truvada) to be used as a preventive device (Grant et al., 2010). Nevertheless, these results remain controversial because another trial, FEM-PrEP, targeted to HIV-negative women and using the same drug (Truvada), was stopped by the Centers for Disease Control and Prevention (CDC) because of the lack of demonstrated efficacy (Fenton, Mermin, & the CDC, 2011).

*TasP.* Finally, a press release from the HIV Prevention Trials Network (HPTN; Thursday, May 12, 2011) indicated that the initiation of antiretroviral treatment (ART) protects uninfected sexual partners from HIV infection (HPTN Study 052). The study carried out by this network observed a 96% reduction in HIV transmission from HIV-positive individuals to seronegative partners (“Editorial,” 2011). The concept of TasP is developed in two directions: as chemoprevention among those who are not HIV-positive to protect themselves from acquiring the infection and as a prevention tool among those who are already infected to help prevent the spread of the infection.

These three new prevention strategies link together structural, biomedical, and behavioral approaches through which it is hoped a cumulative effect will lead to a significant reduction in the risk of HIV infection (Hankins & de Zalduondo, 2010). The very concept of the “combination” of these overtly biomedicalized approaches with the behavioral methods highlights the fact that the behavioral approaches in HIV prevention developed since the mid-1980s were an important part of the process of the medicalization of sexuality, but were not perceived as such. HIV behavioral prevention remained invisible as a form of medicalization specific to sexuality. Thus, since the introduction of ARTs, and their proven efficacy in increasing the life expectancy of people living with HIV/AIDS, societal and preventive responses to the epidemic have entered a new stage of the medicalization of sexuality based on the use of pharmaceuticals and male circumcision. The adoption of pharmaceutical and surgical approaches is based on the assumption of the limited efficacy offered by approaches based on behavior change (Ross, 2010). Needless to say, these claims are seriously challenged by researchers involved in health education research (de Wit, Aggleton, Myers, & Crewe, 2011).

However, these new biomedical recommendations remain rooted in the principle of individual responsibility. Individual responsibility remains the unifying thread bringing together the preventive measures proposed in both stages of the history of HIV/AIDS prevention, but the focus is now on compliance to treatment and biomedical recommendations and much less on sexual behavior change, which now appears only as a rhetorical necessity. Indeed, thanks to the application of pharmaceutical and surgical preventive methods, it now seems that it may be possible to eradicate the HIV/AIDS epidemic (“Editorial,” 2011); the success of these new strategies will depend solely on political will and financial support (“Thirty years,” 2011). Thanks to the availability of pharmaceutical and surgical means, the “human factor,” which also includes subjectivities and cultures and which seems to be the primary obstacle to HIV prevention, is being brought under control. Biomedical technologies will enable the circumvention of behavioral modification processes that have hitherto proved difficult to implement.

However, besides the technical innovations that are proposed to improve the efficacy of HIV prevention, the implementation of these new strategies for treatment and prevention are linked to a “political economy of hope” (Del Vecchio Good, Good, Schaffer, & Lind, 1990, p. 60) that accompanies the renewal of the discourse of prevention, as well as the fight against AIDS more generally. The new biomedical interventions for HIV prevention, subscribing to a model of risk reduction and of prevention, are based on different principles than those that prevailed during the years of “the absence of treatments and vaccines” (Montaner,

2011, p. 308) which were based on the model of discipline. The new stage of biomedicalization of the prevention of HIV/AIDS, rooted in a model of biopolitics, is based on the following dimensions.

### The Failure of Behavioral Approaches and the Hope of Success

During his plenary presentation at the international AIDS conference that took place in Vienna, Austria, July 2010, the Swiss doctor Bernard Hirschel reminded us that ARTs have, as their principal effect, a reduction in viral load to almost undetectable levels in those with good adherence to the drugs, rendering them significantly less, or not at all, infectious. He insisted that behavioral prevention approaches had reached a “dead end,” and that new solutions were needed to reduce the evolution of HIV incidence (Hirschel, 2010). This assumption is part of what is already considered a “medical triumphalism” (Nguyen et al., 2011, p. 291), which claims that new prevention technologies are potentially more effective than behavioral prevention technologies, such as condom use (de Wit et al., 2011).

Paradoxically, the failure of behavioral approaches, which is assumed by the promoters of the biomedical approaches, is accompanied by a strong sentiment of hope associated with the introduction of drugs that appear to be endowed not only with a therapeutic efficacy, but with a certain preventive efficacy too (Del Vecchio Good et al., 1990). This sentiment of “hope” is reinforced by the development of the use of male circumcision in certain countries in Southern Africa by the WHO and UNAIDS in partnership with other international agencies, including the World Bank and the Gates Foundation. A victory against the HIV epidemic now appears to be possible with these new measures for prevention, developed with the help of antiretroviral drugs and surgical techniques—specifically, male circumcision.

However, this sense of hope is not shared by all actors in the field. An editorial in the *Journal of AIDS* discussed the limits of this optimism with a commentary on a Chinese study, which showed that, despite the inclusion of an important psychosocial component, ART did not provide the expected level of protection among HIV serodiscordant heterosexual couples (Cohen, 2010; Wang et al., 2010). “Real life” appears to be more complicated than laboratory experiments. Despite recent results about the efficacy of the PrEP approaches, the controversies about the efficacy of these new biomedical HIV prevention strategies are still ongoing.

### Risk Reduction Versus Prevention

The model of risk reduction is most apparent in the development of male circumcision as a method of HIV

prevention. The randomized, controlled trials that were the basis for the decision to develop this method were based on an estimated level of protection of approximately 50%, which represents only 50% of circumcised men (Siegfried, Muller, Deeks, & Volmink, 2009). This means that this method has a degree of protection much inferior to that of condoms, which is estimated at 80% for both women and men (Weller & Davis, 2001). This measure has been proposed solely in countries and regions where the epidemic is generalized and out of control. Authorities in public health, therefore, consider that a hypothetic reduction in incidence of 50% (among men only) is preferable to the prevailing situation. In his presentation at the International AIDS Society conference held in Rome, Italy, July 2011, the French epidemiologist Bertran Auvert (see Auvert et al., 2011) presented "real-life" follow-up data that confirmed the positive impact of male circumcision on the reduction in (female to male) sexual transmission of HIV infection. Moreover, Auvert et al. highlighted the fact that among the group of circumcised men in which HIV incidence was significantly reduced, "No effect of [medical male circumcision] status on sexual behavior was detected." Therefore, they argued that the reduction in incidence was exclusively due to the physiological effects of male circumcision, and that maintaining a sustained effort of counseling and education no longer appears to be necessary.

### **Management of the Masses Versus the Certainty of Individual Protection**

The absence of a guarantee of individual protection constitutes one of the primary factors that identifies these approaches, especially male circumcision, as part of the biopolitics model. In fact, in contrast to the use of the male condom, which assures near total protection to all users if they do use it systematically, male circumcision does not guarantee individual protection to those men who undergo it (it should also be underlined that this protective measure only applies to the risks to men, and not to women). In addition, at the same time that the combined preventive and therapeutic efficacy of antiretroviral therapies are being confirmed, and as these therapies increasingly begin to be used for prevention, questions of motivation and individual compliance to public health recommendations become less prominent than political and economic issues.

The development of public health policies based on the use of drugs will be significantly more expensive than those approaches based on behavioral change, and it will be necessary to convince both political gatekeepers and the pharmaceutical industry to facilitate effective access to these preventive medications by releasing the funds necessary to meet these challenges and needs. The principal obstacles that stand in the way of the realization of preventative and curative action are no longer of a psychosocial nature, but of a political and economic one (Warren, 2011); funding and increased access to

drugs are, therefore, part of the management of populations on a large scale (Anonymous, 2011b). On the other hand, the implementation of such treatments will have unexpected social and cultural effects (Biehl, 2007).

### **The Desexualization of HIV Prevention: Monitoring the Viral Load Versus Monitoring Behavior**

Disciplinary prevention was based on the voluntary modification of sexual behaviors and sexual relations, grounded on a change in their social and symbolic meanings. The new biomedicalized approach represents a shift away from the monitoring of sexual behavior toward the monitoring of screening, the taking of virological tests, chemoprevention for the HIV-negative individuals, the early treatment of seropositive individuals, and the practice of male circumcision. It no longer consists of controlling sexual behavior, but of regularly checking the variations in viral load in the organism and compliance to a medication regimen. Furthermore, the Ipxrev (pre-exposure chemoprophylaxis for HIV prevention) clinical trials intended for HIV-negative MSM are also based on the premise that behavioral modification among men engaging in high-risk sexual practices has proved unsuccessful, and aims to substitute this approach with the taking of preventive medicine on a model of "vaccine on demand," or "once daily." Other authors, such as Fosket (2010), considered that the contraceptive pill is the paradigm of chemoprevention (i.e., permanent use of medication among individuals in good health to prevent the occurrence of an undesirable effect). This approach is based on the supposition that compliance with pharmaceutical preventive treatments will be easier to achieve than modification of sexual behaviors (Grant et al., 2010).

### **Motivations and Individual Responsibility**

The call for individual responsibility remains the unifying thread bringing together these proposed preventive measures of the two stages in the history of HIV/AIDS prevention. Encouragement of condom use, HIV testing, use of chemoprevention, and male circumcision have not been, and are not, compulsory measures. Encouragement to adopt these behaviors and biomedical measures is based on individual motivation and on the rational model of health. Biomedical preventive methods also remain methods based on behavioral and psychosocial modifications that will certainly need behavioral interventions, which makes some authors assume that ART is a behavioral intervention (Gregson & Garnett, 2010; Nguyen et al., 2011).

### **Conclusion and Perspective**

The discovery of the relative protective effects of biomedical (pharmaceutical) and surgical approaches

(ART and male circumcision) is now a motivation for the adoption of new health behaviors and compliances to medical prescriptions, and for a reduction in the effort expended on education on sexual behavior change, which is now considered less necessary. This relative reduction in educational efforts, and increased emphasis on awareness of risk situations, is associated with the use of methods that do not guarantee any certainty of individual protection of those who use them (which was not the case with condom use or abstinence). In any event, it now seems to the promoters of this new biomedical HIV prevention strategy that compliance with biomedical recommendations is easier to adopt than the long-term modification of sexual behavior, and that compliance with biomedical prescriptions will allow a reduction of the social and individual control exerted on sexual conduct.

The situation that is currently developing around responses to HIV infection is part of a long history of the medicalization of sexuality in the 20th century, which has seen the introduction of the behavioral approaches and their progressive abandonment, be they psychosocial, psychotherapeutic, or sexological, in favor of methods based on the use of drugs. For example, the development of hormonal oral contraception, considered to be highly effective, has—in most industrialized countries—replaced behavioral methods such as *coitus interruptus* and the male condom, which were located at the very moment of the actual sexual interaction. The widespread use of hormonal contraception, presented as a “magic bullet” and endowed with total efficacy in the prevention of unplanned pregnancies, was actually disconnected from the moment of the sexual interaction and placed under the control of women. It proved, over time, to have important limitations. Undesirable side effects linked to the regular ingestion of hormones were reported and provoked controversy. Recent surveys have demonstrated that the use of hormonal contraception did not eradicate the occurrence of unplanned pregnancies (Moreau, Trussell, Desfreres, & Bajos, 2010). In the domain of sexual disorders, there has, since the introduction of Viagra, been an extensive movement pertaining to the pharmacologization of sexuality, building on the idea of the abandonment of the psychogenesis of sexual disorders and the potential for their psychotherapeutic treatment (Tiefer, 2007). As in the domain of contraception, after the euphoria of the possibility of completely overcoming the occurrence of erectile dysfunction, there was a redeployment of psychotherapeutic responses complementary to, or independent of, the use of these drugs (Giami, Chevret-Méasson, & Bonierbale, 2009). Therefore, it can be seen that psychosocial and behavioral approaches were initially put in place as first steps toward achieving certain health goals, with the objective of changing people’s behaviors and cognitions. These treatments and

approaches had limitations, as much in the prevention of HIV as in the domains of contraception and the prevention of induced abortion and sexual dysfunction. One must also note that the development of biomedicalized measures and tools remains constructed on the ground of disciplinary conducts. The major change in this regard is the shift from the discipline related to sexual behavior to a discipline regarding health behavior (use of medication and circumcision). Biomedicalization and the development of biopolitics cannot be effective without the sustained use of some disciplinary approaches, be they focused on sexual behaviors or on health-oriented behaviors.

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