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Reassembling epidemiology: Mapping, monitoring and making-up people in the context of HIV prevention in India

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ABSTRACT

This paper explores how the Gates-funded HIV Initiative in India, known as Avahan, produces sociality. Drawing upon ethnographic research conducted between 2006 and 2012, we illustrate how epidemiological surveillance procedures, undergirded by contemporary managerial and entrepreneurial logics, entwine with and become transformed by the everyday practices of men who have sex with men (many of whom sell sex). The coevolution of epidemiology and sociality, with respect to these communities, is explored in relation to: 1) how individual identities are reproduced in association with standardized units of space and time; 2) how knowledge of mapping and enumeration data is employed in the making up of group membership boundaries, revealing how collective interests come to cohere around the project of epidemic prevention; and 3) how knowledge of epidemiological surveillance and procedures provides a basis on which groups collectively realize and execute local security strategies. While monitoring and evaluation (M&E) specialists continually track and standardize the identities, behaviours and social spaces of local populations (through various mapping, typologization and random sampling procedures, which treat space and time as predictable variables), community members simultaneously retranslate and reroute these standardizing processes into "the local" through everyday spatial management practices for health protection. These grounded epidemiologies, we argue, point to vital sites in the co-creation of scientific knowledge—where the quotidian practices of sex workers *reassemble* epidemiology, continually altering the very objects that surveillance experts are tracking. We further argue that attention to these re-workings can help us unravel the tremendous successes that have been claimed under Avahan in terms of HIV infections averted.

1. Introduction

In the last decade, global health has become prominent in international aid programs. There have been dramatic increases in funding to major global health initiatives such as the US President's Emergency plan for AIDS Relief, the Global Fund to fight AIDS, Tuberculosis and Malaria, and the Bill & Melinda Gates Foundation's AIDS initiative in India known as Avahan. Avahan particularly exemplifies the pace and magnitude of contemporary global health projects. This initiative has funded and directly managed HIV interventions in six of India's high HIV prevalence states over a seven-year period (2003–2010). In 2010, the intervention was transitioned to the public system and funding for HIV prevention was stopped in June 2013 (Sgaier et al., 2013). Costing $US338 million, this lavishly-funded program partnered with 9 international NGOs, 134 district-level NGOs and operated in 83 districts and 605 towns populated with approximately 200 million people. However, despite such massive outpourings of funding into Avahan, there has been a lack of research on the social and political economic consequences of the intervention practices it supports. Blending quantitative epidemiological indicators with managerial practices that emphasize time-cost effectiveness, Avahan's surveillance systems tend to inhibit recognition of these social dimensions. While much is known about Avahan's public health outcomes in terms of reductions in STI and HIV prevalence (Boily et al., 2013; Verma et al., 2010), far less is known about the latent or unintended social effects of its scientific-managerial practices on communities enlisted into their interventions. Although the Global Health Delivery Project at Harvard (Cole et al., 2011) has reconstructed an impressive two-part case study of Avahan, the focus has

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been more on the imperatives of public health practitioners and the employed management strategies, overlooking the deeper social implications arising from Avahan.

This paper describes the ways in which Avahan's extensive surveillance techniques produce sociality. In particular, we examine how geographic mapping and enumerations of people deemed to be "the most high at risk" for HIV infection constitute particular regimes that are highly effective in ushering in individual and collective identities, relations of responsibility, strategies for protection, and forms of belonging. To explore how Avahan's surveillance systems have given rise to these forms of social life, this study takes cues from the rich body of social scientific literature on citizenship (e.g., Isin, 2008; Plummer, 2003; Ong, 1999). This field of inquiry has increasingly departed from the traditional notion of citizenship as a "natural" legal status bestowed upon rights-bearing individuals, those who belong to the nation-state according to their birthright (Marshall, 1950). As many social scientists rightly insist, the issue of who belongs to the nation-state is certainly no straightforward matter (Alexander, 1994). Historically, sexual minorities in India have encountered considerable exclusion from health and other social services (Cornish, 2006; Lorway et al., 2013). However, the Gates Foundation has provided extensive specialized clinical services and drop-in centers to sexual minorities, and has promoted the de-stigmatization of sex workers (for example see Sen, 2011) as well as people living with HIV/AIDS in India through the Hero's Project. Moreover, Avahan's community mobilization schemes have helped enhance the legitimacy of marginalized communities in the eyes of the Indian nation state, globally portraying Indian sexual minorities in a positive light. However, one might argue that the resultant form of legitimacy is somewhat narrow in its confinement to HIV prevention. Under the Avahan umbrella, diverse groupings of sex workers and their transnational allies—including rights activists, health promotion specialists, community workers, academics, and local policy makers—have mobilized around the idea of an epidemic "concentrated" among sexual minorities to enhance the delivery of vital health resources to marginalized people. Yet, despite the confinement to HIV-related health services, Avahan has indeed re-territorialized a sector of India's health system. By authorizing external experts to manage HIV prevention in India, access to specialized services for Indian citizens was governed at a supranational level.

Avahan's highly publicized intervention has also raised awareness among groups of sexual minorities around the unequal burden of disease that their communities endure. In this context, the concept of "biological citizenship" (Rose and Novas, 2005; Petryna, 2002) offers particular insight for our study. Anthropologist Adriana Petryna (2005:166) describes how "scientific knowledge became a crucial medium of negotiating individual and family survival" in the post-Chernobyl disaster era when potential remunerations for victims were adjudicated by state authorities on the basis of individuals' abilities to utilize scientific information on radioactive exposure to establish their claims. Biological citizenship thus refers to the role of biological knowledge in reshaping how persons are understood by authorities and the way these individuals construct and understand their own identities. The use of "biologically coloured languages" (Rose and Novas, 2005: 445, 448–451) to describe identities also gives rise to new forms of sociality, or biosocialities, such as when communities form around a common affliction or genetic disorder (Gibbon and Novas, 2007; Hacking, 2006; Rabinow, 1996). Furthermore, the enumerative procedures that guide the administration of health services to vulnerable or afflicted communities may "inflect lived experiences" and produce subjectivities and socialities (Sangaramoorthy and Benton, 2012: 287). Drawing upon the notion of biological citizenship, Nguyen's (2010:7) discussion of "therapeutic citizenship" shows how the attempt by international agencies to mobilize communities of HIV positive people inadvertently created a local market in which public confessions of HIV status governed access to life saving medicines and health services. Under Avahan, sexual typologies, community mobilization schemes, and biological-behavioral surveillance techniques have certainly created new slots for managers and scientists to realize their goals—i.e., to enumerate sex workers and to identify "program coverage gaps." But little is known about the extent to which the participating communities take up, modify, resist or abandon scientific definitions and measurements of their bodies, as they mobilize to pursue their own interests.

Building upon these ideas of citizenship, our work has begun to explore how public health surveillance procedures and discourses give rise to, as they entwine with, new social formations. As sexual minorities increasingly come to understand and enact their identities, social ties and political allegiances within the context of these "cultures of measurement" (Setel, 2009: 401), new kinds of societies emerge – vast networks of community groups that utilize epidemiological terms of reference (notions of space, time, pathogenesis, risk and security) to gain access to health protection, social legitimacy, and share a sense of belonging and individual and group responsibility (Lorway and Khan, 2013). We specifically introduce three distinct aspects of the co-evolution of epidemiology and social life with respect to men who have sex with men (MSM), many of whom sell sex. Firstly, we illustrate how these participants reproduce their identities by locating themselves spatially and temporally. This involves a relation with the self in association with units of space, time, and sexual risk management practices. Secondly, and relatedly, we describe how knowledge of mapping and enumeration data is employed in the making-up of group membership boundaries and the limits of acceptable participation, revealing how collective interests come to cohere around the project of epidemic prevention. And thirdly, we demonstrate the ways in which knowledge related to epidemiological surveillance provides the spatial and temporal basis on which local security strategies are collectively realized and executed. More than simply acquiring a degree of literacy in epidemiological knowledge, Avahan participants make this information work in their everyday lives in ways that are neither always in line with nor expected by specialists tracking the intervention's progress. We demonstrate that these overlooked practices are, however, crucial to an understanding of the intervention's effectiveness in preventing HIV infections, at the same time as they also speak to the agency and citizenship of these targeted communities.

1.1. Mapping and epidemiological speculation

The mapping and enumerative procedures we analyze reflect important transformations in the employment of epidemiology in HIV prevention science, calling to mind the words of Vincanne Adams (2009: 247) on the subject of anticipation and preparedness in contemporary public health that "emerges at a moment of actuarial saturation, when one realizes that the sciences of the actual can be … replaced … by way of the speculative forecast, itself relying on proliferating modes of prediction." Large multilateral organizations, especially the World Bank, and government ministries throughout Asia (and increasingly in Africa) have recently allocated considerable funds to HIV prevention programs on the basis of the highly speculative findings generated from geographic mapping and enumerations of "high risk" populations. Even in countries where HIV prevalence is relatively low (such as Bhutan, Sri Lanka, and the Philippines), the World Bank has contracted teams of experts, comprised mostly of medical epidemiologists and demographers, to map specific locations and times where "high