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Beyond the male-migrant: South Africa's long history of health geography and the contemporary AIDS pandemic

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ABSTRACT

This article begins by noting the contribution that past South African writings on health can make to the field of health geography—especially writings on male migration and syphilis from the 1940s that conceptualized space as *relational*. However, the second part of the article notes that the rapid rise of AIDS in the post-apartheid period influenced the problematic projecting forward of the male-migrancy model. Ethnographic and secondary data show how AIDS is embedded in under-researched social and spatial structures after apartheid. In tracing these processes the article combines anthropology, geography, and political economy to chart an interdisciplinary analysis of the uneven geographies of health.

The shift to "health geography" signals a widening of inquiry beyond the traditional emphasis within "medical geography" on disease ecology and health services distribution (Kearns and Joseph, 1993). Although GIS has facilitated something of a renaissance in the positivism that characterized medical geography, a more qualitative and theoretical agenda has emerged (for instance Kearns, 1993; Kearns and Joseph, 1993; Kearns and Moon, 2002). At the same time, health geography is generally (but by no means wholly) centred on the West and, with some exceptions, does not yield much influence beyond the sub-discipline (Kearns and Moon, 2002). Its most well-known work derives from the strong influence of humanism in rejecting medical geography's positivism (for instance Gesler, 1992; Gesler and Kearns, 2002; Kearns and Joseph, 1993).

This article's first aim is to bring attention to South African health geography writings from the 1940s (on postcolonial geographies and recognizing knowledge from outside the West see Robinson, 2006; Gilmartin and Berg, 2007). While critical reviews of health geography have recently argued that the sub-discipline has not embraced a "relational" understanding of space (Cummins et al., 2007), in South Africa, as I show, the conceptionalization of places as enmeshed in socio-spatial processes of migration and dispossession has been central to critical health research for over 60 years. A second aim of the article is to contribute to interdisciplinary approaches to health geography by exploring South African health inequalities in the contemporary era. Here, the approach draws on analysis of political economy, the household, and gender to discuss the rapid rise of HIV/AIDS. I therefore add to recent moves to incorporate race and gender into the field of health geography (see for instance Dyck, 2003, 2006) and emphasize spatial health inequalities (for a recent review see Doyle, 2005).

The article begins by laying out how in 1940s rural KwaZulu-Natal medical doctor Sidney Kark confronted the health consequences of racialized land dispossession and circular male migration to espouse a powerful model to explain the syphilis epidemic, which I shall call here the *male-migrant-infector-model*. This model highlighted how some rural-born "African" men moved to the distant gold or diamond mines for long periods, became infected with syphilis and then returned to infect their rural partners. From the 1970s, however, many scholars embraced a more explicitly Marxist approach to theorize the health consequences of deepening links between capitalism and racism. High rates of malnutrition and disease in rural areas, these writers showed, were inextricably linked to racial segregation and capitalist development.

Although democracy replaced minority white rule in 1994, it coincided with the onset of an AIDS pandemic that today infects nearly 30% of pregnant women.[1] This urgency ensured that some

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[1] Annual HIV prevalence figures in South Africa are compiled through anonymous tests on pregnant women's blood taken during antenatal visits. In 2007 this found HIV prevalence of 28% (Republic of South Africa, 2008). More detailed trends, including geographical difference, are calculated from wider surveys of the country's population, the largest of which in South Africa is a household study conducted by the Human Science Research Council. In 2002 this found that 12.8% of women and 9.5% of South African men were HIV positive; the 2005 study found that 13.3% of women were infected and 8.2% of men. Unlike antenatal figures these include all of the population including the elderly and the young (HSRC, 2002, 2005).

observers drew somewhat unquestionably on the earlier model of male-migrancy to explain AIDS' spread. In doing so, I argue, they downplayed new configurations between social inequalities, the household, and geography. Through a brief study of one place, Mandeni, KwaZulu-Natal, the article tracks the increased movement of women, new forms of dependence some women have on men, and the considerable rise of informal/shack settlements that have nearly twice the HIV rates of both rural and urban areas (on informal settlements and HIV prevalence see HSRC [Human Science Research Council], 2002, 2005). This analysis also suggests new geographies through which health is racialized. One recent household study found HIV infection rates of 13% for "Africans", 1.9% for "coloureds", 1.6% for "Indians", and 0.5% for "whites" (HSRC, 2005). What requires explaining today, then, is not only how colonialism and apartheid led to the "premature death" of black bodies but the socio-spatial dynamics that underpin this today.[2] (At this point it must be noted that the use of colonial/apartheid-based racial terms is problematic but unavoidable if the legacy of institutionalized racism that divided society along these lines is to be recognized.[3])

Health debates in South Africa 1940s–1980s: male migrancy, households, and uneven geographies

The Union of South Africa was born in 1910 following the reconciliation of previously antagonistic white groups, specifically descendents of mainly Britain (English-speakers) and Holland, Germany, and France (Afrikaans-speakers). Compared to other countries in the region, the discovery of diamonds and gold in the late 19th century encouraged a heavy settler presence. At the core of the racialized capitalism that ensued was the oscillating migration of black African men from rural areas to mines. All but the oldest African men were forced by economic conditions (including taxes) to work for most of the year in distant urban areas. In turn, most African women and children were forced to live on the languishing "reserves" that occupied only 13% of the country. After 1948, these racial contours became further hardened when the National Party assumed power under the banner of apartheid ("separateness" in Afrikaans). During this period the state segregated cities more intensely, forced African women to join men in being required to carry "passes" that restricted their movement, and recast rural "reserves" as more autonomous ethnic "homelands" (granting "independence" to four).[4]

In 1940, just prior to the period of apartheid, medical doctors Sidney and Emily Kark established a pioneering community health project at a rural location called Pholela. This area, then part of a rural "reserve", is today located in the KwaZulu-Natal province. In this languishing rural setting diseases such as TB, polio and cholera were common. But no disease pattern demonstrated the effects of population displacement on health more than the syphilis epidemic that reached its peak in the 1940s; it was only in the 1950s that penicillin became widely available to drastically cut (but never end) the burden of the disease.

In 1949, the Karks' considerable experience in studying and treating syphilis led Sidney Kark to author a famous article on the subject in the *South African Medical Journal (*Kark, 1949).[5] This piece broke new ground by laying out what can be called the male-migrant-infector-model. In it, Kark combined local household data with national statistics and medical reports to argue that the syphilis epidemic had its roots in racial segregationist policies that fostered patterns whereby African men circulated between rural and urban areas. Men, he showed, were leaving rural areas and becoming infected with syphilis. Then, they returned to infect their rural wives. Consequently, "The first line of treatment", Kark (1949, p. 83) wrote, "must be to remedy the unhealthy social relationships which have emerged as the inevitable result of masses of men leaving their homes every year."[6]

I will return later to explore the weaknesses of the male-migrant-infector-model when applied to the contemporary period and argue that more attention needs to be given to gender dynamics when considering the household. But it is worth commenting on the extent that the Karks' research represented considerable theoretical/methodological advances in the study of health. From the early colonial period, doctors and missionaries in Africa tended to see syphilis as resulting from either the inherent promiscuity of Africans or the dangerous loosening of controls on African women (Vaughan, 1991). In the post-world war II era, the linear lens of modernization theory came to mold studies of health in the "developing world" (described in Stock, 1986). In contrast, living for a long period in the Pholela community, the Karks blended an historian's sensitivity to social change with an anthropologist's eye for household dynamics. This was also history and ethnography that could not ignore geography: the devastating effects of circular male migration were so painfully obvious.[7] Immersed in this rural area, Sidney Kark was forced to conceptualize "local" places in terms familiar to today's human geographers as unbounded and intertwined with multi-scalar processes, including those forged by mining and, increasingly, secondary industry. Hence, foreshadowing critical human geographers' work in the 1970s, Kark wrote about the rural and urban areas as being relationally produced and power-laden:

> This concept of Pholela social structure *as a complex of rural and urban processes* assists in us understanding the related factors influencing the state of well-being and the incidence of ill-health of the Pholela community" Kark (1950, p. 33, my italics)

[2] On race, geography, and 'premature death' see Gilmore (2002).

[3] By the end of the apartheid era there were four widely used "racial" categories: African, white, Indian, and coloured. I use the lowercase for coloured and white to reflect their social construction but uppercase for African and Indian since, although socially constructed, the words are derived from geographical places. The article mainly discusses South Africans previously categorized as "African"; at times I use the term "black African" to stress the shared sense of oppression among non-white groups. I use scare quotes conservatively to improve the article's readability.

[4] There is, of course, an enormous amount written about male migration and urban segregation under apartheid. Within geography see for instance Lemon (1991), Parnell and Mabin (1995), and Robinson (1996).

[5] Most of the writings associated with the Karks were single authored by Sidney Kark. I largely follow this convention in the paper but recognize that at other times Sidney and Emily Kark describe themselves as working closely together (see for instance Kark and Kark, 1999).

[6] The Karks are also well known today as pioneers of what came to be called Community Orientated Primary Health Care (COPHC). In essence, this involved the integration of prevention and cure at a local level. The Karks eventually left South Africa in the 1950s; their model of community-based health influenced many countries but was only revisited in South Africa when the country embraced democracy in the 1990s (Yach and Tollman, 1993).

[7] On the Karks' methodological innovations see Yach and Tollman (1993) and Trostle (1986). In their student days at Witwatersrand University the Karks associated with anthropologists such as Hoernlé, Gluckman, Kuper, Krige, and historian MacMillan: "It was the influence of these men and women that led to our life-long interest in the use of social anthropology and social history as integral parts of our social and epidemiological knowledge" (Kark and Kark, 1999). One needs, of course, in assessing the values of the Karks' work, to flag some limitations, if they are not fully explored here. The most obvious is that they operated through a largely biomedical framework and did not give great attention to non-biomedical understandings or meanings around health.

In the decades after Kark's work in Pholela, scholars critical of apartheid took a more overtly Marxist turn. In the 1970s the "race/class debate" dominated theoretical discussions: was apartheid sustained by racism as liberals believed, or capitalism as Marxists thought? (for a summary, see Posel, 1983). One of the most influential Marxist attempt to theorize apartheid was Harold Wolpe's (1972) analysis of the "articulation" between capitalist and pre-capitalist economies. Wolpe argued that capitalism was functional to racial rule because cheap labor was sustained by state policies that restricted Africans' urbanization and channelled the costs of social reproduction (raising children, old-age, etc.) into rural areas. Anti-apartheid health writers similarly linked the exploitation of rural areas to whites' high living standards. Neil Andersson and Marks (1988), Ben Wisner (1991), and Randall Packard (1989) documented the devastating health inequalities in South Africa, especially between "white" South Africa and the rural homelands. For instance, infant mortality among (mostly urban-based) whites was 12.6 per thousand whereas in one ethnically-prescribed homeland it was 130 per thousand (Andersson and Marks, 1988).

As important as this analysis was, by the 1980s scholars faced another conceptual challenge: how to understand the apartheid state's attempts to reform an increasingly illegitimate system of racial rule. Under intense pressure from heightened political struggle, the state legalized black African trade unions, revoked pass laws (which restricted Africans' movement), and introduced market orientated economic and social policies. Theorizing this shift, Harold Wolpe reworked the concept of "articulation" to enable theoretically informed studies of the contingent relationship between race and class (Wolpe, 1988; see Hart, 2007 for a recent discussion of the concept of "articulation" in South Africa). This recognition that apartheid could yield divisions among black South Africans was important. In the 1980s, pro-market reforms, the growing unemployment crisis, and the expansion of private health care caused key health writers to look in alarm at increased differentiation in health (Andersson and Marks, 1988). Wisner (1991, p. 124) drew directly on Wolpe's conceptualization of race and class as contingently joined to argue that democracy would not necessarily bring equality: "constant struggle will be required on the part of the poor." And democratization, he argued, should be accompanied by dramatic spatial shifts: "Ultimately, the whole of South Africa's spatial organization—the relationship between towns and villages, the distribution and flow of people, patterns of access to tax revenues and scarce resources—will have to be reworked if majority rule is to give rise to social justice" (Wisner, 1991, p. 130). These warnings, as we shall see, were not heeded.

AIDS after apartheid: projecting forward the male-migrant-infector-model

With cruel irony, South Africa's transition to democracy coincided with the arrival of a new virus among its population. In the early 1980s, the first immune deficiency deaths consistent with HIV/AIDS were diagnosed in South Africa among white gay men, a group with relatively privileged access to health services. After 1983, when the HI virus was isolated, epidemiologists were able to document the very high HIV rates in parts of Central Africa and the virus' increasing prevalence in Southern Africa. During the period of political transition that began with Nelson Mandela's release from jail in 1990 and culminated in the 1994 general election, HIV prevalence rates among pregnant women jumped from 0.7% to 7%. The rapid subsequent increase to almost 30% in 2000 surprised many observers because of the country's relatively developed infrastructure, at least compared to many other parts of Sub-Saharan Africa (HIV statistics taken from Republic of South Africa, 2008).

Although over time a more diverse set of explanations, from sexual violence to chronic unemployment, have been used to explain AIDS in South Africa, the male-migrant-infector-model shaped the early period of research.[8] This model, while undoubtedly of merit in explaining AIDS' early spread, downplayed radical shifts in the country's political economy. It also, as Marc Epprecht (2008) recently points out, effectively ignored the potential role of same-sex relationships in spreading HIV. Yet it won early favour among many scholars because of the urgent need to provide a progressive alternative to racialized narratives of "African promiscuity" that swirled around discussions of AIDS (on the construction of the category of "African AIDS" see Patton, 2002). To this end, the male-migrant-infector-model provided a ready made political economic model that unequivocally linked AIDS to one of the most potent symbols of apartheid, migrant labor.

Jochelson et al. (1991), was one of the earliest and most influential articles to put forward this framework, warning directly of the potential for HIV to spread rapidly among South African mineworkers. A decade later, in 2001, social researchers gathered at the "AIDS in Context" conference organized by the History Workshop, a research group that pioneered radical social histories in South Africa. At the conference, Sidney Kark's 1949 paper was cited a number of times in proceedings to bring attention to the importance of migrant labor, and more broadly apartheid, to the spread of STIs in South Africa (see the special editions of *African Studies* 61, 1, 2002 and *South African Historical Journal* 45, 2001 that resulted from the conference). Following in this path, in 2003, the journals *Society in Transition* and the *International Journal of Epidemiology* both reprinted Kark's landmark piece, "The social pathology of syphilis" to suggest its contemporary relevance.

The male-migrant-infector-model's high point in popular culture came with the release of the South African made AIDS film *Yesterday* in 2003. The film tells the story of a young uneducated KwaZulu-Natal mother who falls ill and discovers her mineworker husband has infected her with HIV. The man, working far away in a mine, presumably caught HIV during his long absence from his rural home. His wife, in turn, was infected during one of his visits. Undoubtedly representing one patterns of HIV transmission, *Yesterday* was criticized for playing into stereotypes of "Third World Women" by presenting rural women as "resilient" but ultimately immobile and sexual passive (on "Third World Women" see Mohanty, (1995); for a critical review of Yesterday see Mbali and Hunter (2004)). In addition to the fact that many women are extremely mobile today, a dynamic considered below, the film's portrayal of women as passive victims was contradicted by women's leading role at the time in struggles over HIV treatment (on the Treatment Access Campaign see Robins, 2004). Nevertheless, despite its faults *Yesterday* became South Africa's official Oscar nomination in the best foreign film category in 2003 and was showcased at the 2004 Bangkok AIDS conference, among other venues. Yet *Yesterday* brings to light important questions. Are African women passive and immobile as they are represented in the film? Do most African men still work in the gold and diamond mines? Or, are there other, newer patterns of geography and sexuality that are driving AIDS?

[8] On violence in an urban areas see Wood and Jewkes (2001) and, in rural areas, Pronyk et al. (2006); for a good overview of recent writings on AIDS in South Africa see Lawson (2008).

Geography after apartheid: understanding new forms of inequality

In 1994 the African National Congress (ANC) assumed power with a large parliamentary majority. In the run up to the election, the ANC and its allies in the unions and civil society drafted the Reconstruction and Development Program (RDP), an ambitious plan to reduce poverty, improve housing, create jobs, and democratize government. Yet, intent on attracting foreign investment, the ANC-led government quickly shifted rightwards and one of its first moves was to drastically reduce trade tariffs (Marais, 2001). Businesses had been shedding jobs since the economic crisis of the mid-1970s but unemployment continued to rise to a devastating rate of 40% in the 1990s (Nattrass, 2003). Labor market shifts, especially those brought about by trade liberalization, impacted particularly negatively on women's employment and wages. From 1995 to 2005 unemployment rose by 12–72% for 15–24-year-old women and by 11–58% for men of the same age (Republic of South Africa, 2006, p. 18).

Habib and Padayachee (2000, p. 24) have argued that: "The ANC's implementation of neo-liberal economic policies has meant disaster for the vast majority of South Africa's poor." But stark new riches became apparent in the country: in 2005 South Africa had the fourth biggest jump in the number of dollar millionaires of any country in the world.[9] Access to health also became increasingly uneven after apartheid. In the 1980s, the expansion of private health care had partially insulated the middle-classes from health problems common among the poor. After apartheid, although more resources were allocated for public health and social payments (chiefly pensions and a new child support grant) private health boomed among the growing middle-class. Ten years after the elections 15% of the population had access to private health-care facilities while the remainder, most of whom were poor and black, depended on an overburdened public health service (Health Systems Trust, 2004).

Nor did the post-apartheid state transform spatial inequalities in a radical way. After apartheid the thrust of the state's spatial interventions were as follows: to integrate formally black and white local councils and homeland/provinces, embark on limited land reform, and meet numerical targets for the delivery of thousands of two-roomed "RDP" houses for the poor (low-cost housing named after the "Reconstruction and Development Programme"). Taking housing policy as an example, the market mechanism for delivering RDP houses meant that many were built on the outskirts of towns where land is cheaper. "There has been no attempt to intersperse them in the former white areas", says Cosmas Desmond (2008, p. 27) "This means apartheid has not died: it has had a makeover and bought some new clothes." In fact, former white suburbs became the main desegregated residential spaces, attracting middle-income earners from all social backgrounds (for example see eThekwini Municipality, 2003). The poorest South Africans, who are overwhelmingly black, still tend to reside in townships (urban areas formally reserved for Africans), rural areas, and informal/shack settlements, the latter which have grown greatly after apartheid. These patterns can be seen in the author's research site, Mandeni.

Mandeni

Mandeni is situated around 100 km northeast of Durban in the KwaZulu-Natal province. This area, historically a source of migrant labor, attracted its first major industry in 1954 when SAPPI (South African Pulp and Paper Industries Limited) built a large paper mill on the banks of the Thukela River. An even more significant boost to industry in the area, however, came in 1971 when the state targeted this homeland space for "industrial decentralization" and set up Isithebe Industrial Park. These artificial spaces, many established in previously rural areas, were part of a giant apartheid engineering project aimed at forcing most black South Africans to live in one of 10 ethnic homelands—and not, therefore, in large "white" towns. By 1990, generous government subsidies ensured that employment levels in Isithebe reached 23,000, with women making up around half of the workforce. Despite the industrial park's fabricated roots, it attracted a diverse spread of industries: in 1990, garment (clothing and textiles) accounted for 33% of employment, metal for 22%, plastic for 12% and paper for 6% (Community Services Physical Planning Directorate, 1992). The gendered division of labor meant that men found work in much better paying sectors (especially metal) than women (generally garments); nevertheless, unionization in the 1980s meant that wages rose in all factories.

Yet, in the 1990s, the area's fortunes quickly changed: from a jewel in the apartheid crown, Mandeni became marked by industrial decline. In the early 1990s, as the state removed industrial subsidies, the industrial park shed jobs and, after 1994, when the new government reduced trade tariffs, factories faced crippling competition from cheap imports. Women, in particular, continued to move in greater numbers to stay in informal/shack settlements but many could not find employment (Plate 2).

According to the 2001 census, 95% of Mandeni's residents are African, nearly two and a half percent Indian/Asian, around two percent white, and half a percent coloured.[10] In the post-1948 apartheid era, the Group Areas Act ensured that all residential areas were divided strictly by race. To the south of SAPPI, the white town of Mandini, complete with nine holed golf course, was built. To the north of SAPPI, the township of Sundumbili was established for Africans; this was located in a former reserve that became part of the KwaZulu "self-governing" homeland on its formation in the 1970s. Indian and coloured areas were centred on Tugela and Mangete respectively. Cutting through the heart of Mandeni are large sugar cane farms owned by white South Africans. The author lived extensively to the north of Isithebe Industrial Park in the informal settlement.[11]

Mandeni is striking in that its social geography represents almost the antithesis of the male-migrant-infector-model: here, it is women who are particularly mobile, many arriving in the informal settlement to look for work in the nearby factories but retaining close links with rural areas in which their children are often raised. At the same time, the area harbors some of the highest rates of AIDS in the world. In 1997 *Drum* magazine described the area as the "AIDS capital of KwaZulu-Natal" (Drum, 1997). This is a terrible reputation if we consider that KwaZulu-Natal is the country's most AIDS-affected province, where over 37% of pregnant women are now said to be HIV positive. In fact, iLembe, the health district in which Mandeni is located, was found

[9] In 2005 South Africa's number of dollar millionaires increased by 15.9%, a figure surpassed only by South Korea, India, and Russia. SouthAfrica.info, "South Africa's dollar millionaires on the rise," http://www.southafrica.info/business/success/world-wealth-200606.htm (accessed November 24, 2007).

[10] Data from the 2001 census is calculated from tables found at www.statssa.gov.za.

[11] The study comprised four stays in Mandeni starting with preliminary ones in 2000 and 2001. The largest period of research was conducted from 2002 to 2005, and the last research took place in 2006. The author lived extensively in Isithebe Informal Settlement while conducting research. In total, 300 or so formal interviews with around 200 people, of all ages, were undertaken. Nearly all the interviews were conducted in *isiZulu* at informants' residences and translated by the author, occasionally with some help from *isiZulu* speakers on certain passages. A research assistant was present and assisted during most interviews. Further details on the study can be found in Hunter (forthcoming).

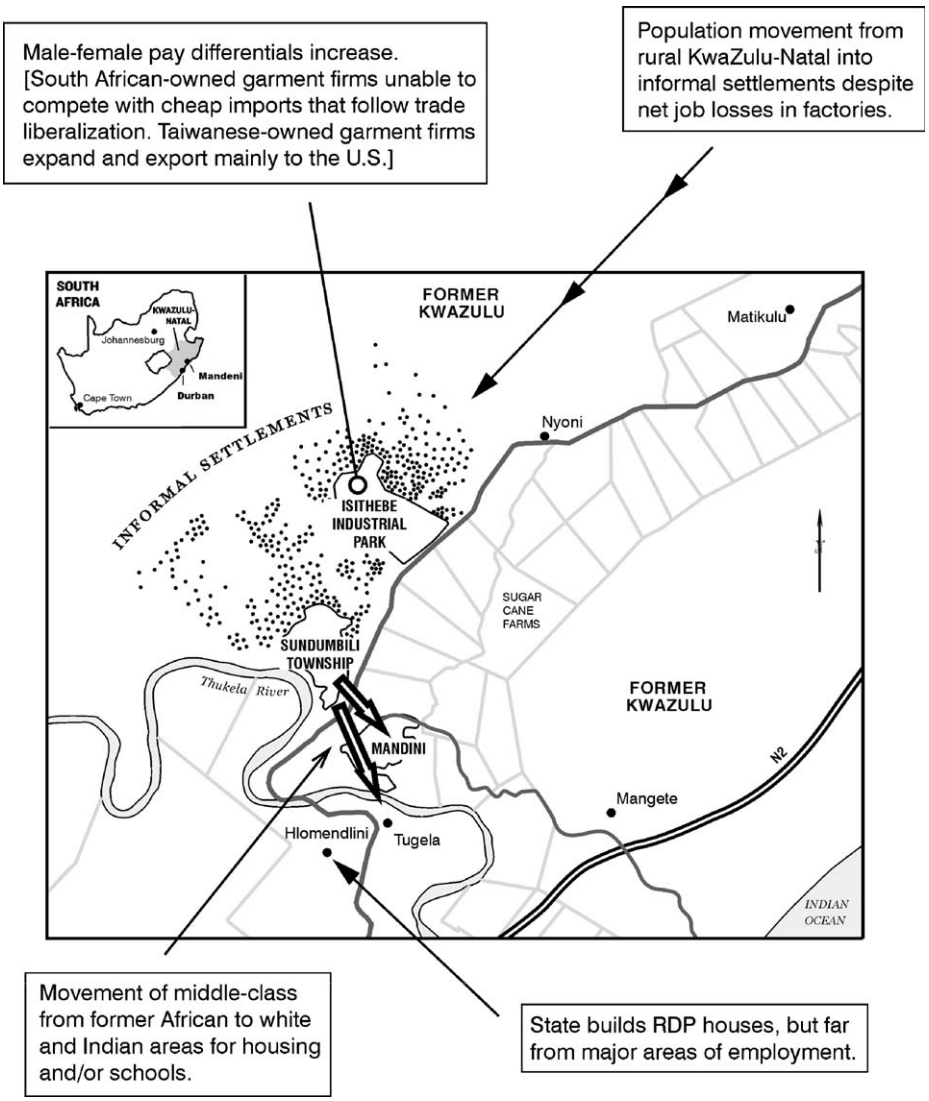

Fig. 1. New global connections: forces reworking Mandeni's social geography after apartheid.

to have the second highest HIV rates of the country's fifty-four health districts, 41.5%, in 2007 (Republic of South Africa, 2008).

After 1994, Mandeni's social geography shifted in 4 main ways. The first was the amalgamation of racially separated spaces (coloured, white, Indian, and African) into a new municipality. The second was the quite dramatic movement of middle-class black Africans into the former suburbs previously reserved for whites and, to a lesser extent, Indians. Where this has not involved whole families moving it has seen children being placed into schools in these areas. The third was the tremendous growth of *imijondolo* (shacks) both in the township and nearby informal settlements. The fourth was the state's building of a new "RDP" low-income housing project at Hlomendlini. Of note, the site for these 1000 new houses was quite far, some 10 km, from the main employment opportunities in the area—a common trend across the country because of the lower cost of land in peripheral urban areas.

This changing geography intersected with shifts in the labor market consistent with national trends. Industrial restructuring in the dominant local sector, the garment (clothing and textile) industry, connected Isithebe to new international nodes of investment and consumption, but in doing so worsened pay and conditions. After trade liberalization, South Africa's national clothing retailers greatly increased the proportion of garments they sourced from overseas, especially from China. Consequently, most of the dozen or so large and unionized South African-owned clothing firms in Isithebe closed or relocated. Women in Isithebe came to depend on the growing number of smaller Taiwanese-owned clothing and textile firms that had begun to invest in the industrial park in the 1980s and looked to benefit from a favourable US–Africa trade agreement of 2000.[12] Workers in these (now rarely unionized) firms told me in 2000 that they earned as little as R65 (US $6.50) per week, although salaries were more typically R100 (US $10). In contrast, while the male-dominated sectors such as the metal industry shed many jobs, salaries in these mostly unionized firms remained steady. This widening gender pay gap meant that some men's salaries grew to become 10 times those of women's. These shifts in the 1990s and early 2000s are summarized in (Fig. 1).

[12] The background to Taiwanese investment in KwaZulu-Natal is described in Hart (2002). The American Growth and Opportunity Act in 2000, which promotes exports from Africa to the US, is one reason why reasonable levels of employment were maintained in the clothing sector.

The household and women's migration

As Mandeni's changing geography suggests, the biggest single reason to question the male-migration-infector-model (men working at mines and infecting women) is simply that it is not an accurate way to explain the political economy of sexuality at the present conjuncture. As noted earlier, the film *Yesterday* portrays a male migrant working at a mine and then returning to infect his passive and uneducated wife with HIV. Yet, while some men do still migrate to urban areas and support wives in rural areas, this pattern is not supported by the case of Mandeni nor, in general, by wider surveys. As the example of Mandeni suggests, women themselves are increasingly mobile—though rarely finding formal work.

"Frequently", as Slater notes for the former rural homeland of Qwaqwa, "the diversification of livelihoods took place across geographical space" (Slater, 2002, p. 612).[13] What is striking today is how rural women's migration is central to this trend and reflects and affects changes to household structure. In the 1950s, when virtually all men from rural reserves worked in mines or factories for extended periods, Kark's (1950) data showed that eight out of ten men and only two out of ten women aged 20 were absent from Pholela in rural KZN. Today, studies show substantial increases in women's movement. In 1993, according to Posel (2006), an estimated 30% of African migrant workers in South Africa were women but by only 1999 this had increased to approximately 34%. Posel was also able to determine that considerably more female migrants were unmarried than married (around 12% compared to 3.5%). These findings draw important attention to connections between women's migration and declines in marriage. Indeed, only three out of ten adult South Africans categorized as African were married according to the 2001 census, compared to six out of ten in 1960.[14] This decline in marital rates from the 1960s is complex but can be attributed to women's increased move into the labor force (but not necessarily into formal employment), the failure of many men to find employment and thereby pay bridewealth for women, and the terrible economic demise of rural areas.

More intensively researched but geographically smaller demographic studies are able to provide important additional details. The Africa Centre for Population and Health Studies is based in Hlabisa, a mostly rural part of northern KwaZulu-Natal. It visits each household in a geographical area that it calls the Demographic Surveillance Areas (DSA) every 6 months. It is therefore able to document in some detail the lives of the area's 85,000 strong population and better able than national data to capture shorter term movements, a pattern favoured by women, especially those who leave children in rural areas. One notable finding is that there are now only slightly more women than men living in the rural area (around 5% more). The study also found a steady rise in women's migration from 2000 and that gross migration rates (in and out migration taken together) were nearly the same for women as men (see Muhwava & Nyirenda, 2007).[15]

Although there is undoubtedly great variety in women's movement patterns what is clear is that most women do not wait in rural areas to be infected by their migrant partners, the pattern of infection described convincingly by Kark in the 1940s for syphilis. Indeed, in a recent examination of discordant couples (where only one partner is HIV positive) in rural Hlabisa and Nongoma, Lurie et al. (2000) found that in nearly a third of the cases it was women, not men, who were HIV positive. Rural women, it seems, were not the docile and asexual persons *Yesterday* depicted them to be. Of course, these contours of infection interact with biological factors that make women more susceptible to HIV infection. Especially shocking, as a result, is the high infection rates of women born into a world of political freedom but terribly high unemployment. A recent study in South Africa found that nearly four times as many women as men aged 20–24 were HIV positive (23.9% compared to 6%), and that a significant number of young women had older partners (HSRC, 2005).

One critical geography intersecting with these trends is informal/shack settlements—areas today that contain the highest HIV rates. As aerial photos from Mandeni show, informal settlements mushroomed rapidly in the area in the 1980s and 1990s and these patterns are also reflected in larger towns like Durban (Plate 1). The two most widely stated reasons why informal settlements increased across South Africa at this time are the chronic shortage of housing and the inability of rural homelands to provide subsistence for their populations. These pressures are typically seen to have exploded when the state abolished the hated pass laws in 1986, thus allowing the free movement of all South Africans regardless of race. While this is true, the growth in shacks also represents a geographical materialization of shifting household formation. Indeed, between 1994 and 2003 the state did fund one million "RDP" houses, and yet the number of informal dwellings rose by 688,000 between 1996 and 2003 (Hempson and O'Donovan, 2005; Mail & Guardian, 2006). Housing planners were therefore dealing with a moving target: households were splitting, stretching, and therefore proliferating. From 1995 to 2002 the average household size fell from 4.3 to 3.8 and single households rose from 12.6% to 21% of all households (Pirouz, 2004). Of course, there is enormous variety in informal settlements and we must be wary of generalizations (see Crankshaw, 1993; Harrison, 1992). Yet, the rise of shacks is a manifestation not only of a housing crisis but of a set of complex, socio-spatial trends that consist of reduced marital rates, smaller households, and the greater movement of women, all of which are deeply political processes connected to poverty and inequalities and which have important implications for sexual relations.

Sexuality and space

Before considering briefly how these trends play out in the realm of sexuality it is important to note that sexuality provides only one avenue into understanding AIDS. Poverty and poor living conditions affect the spreads of infectious diseases in many ways; for instance they drive malnutrition and health-sapping parasites. AIDS' rapid spread is also less surprising if we recognize the skewed nature of health institutions that emerged under apartheid. One of the apartheid state's most well-funded health interventions, its massive population control program from the 1970s, was narrowly aimed at reducing the rate of childbirth among black Africans (on family planning policy see Brown, 1987). Injectable contraceptives and the pill were favoured over condom promotion, even though the later would have also provided a better institutionalized response to sexually transmitted

[13] For wider empirical work on livelihoods in rural South Africa see the special edition of the Journal of Southern African Studies in 2002 (28, 3) and especially the pieces by Murray, Slater, and Francis. For an early piece on how rising unemployment contributed to men's urban wages being distributed through rural sexual networks see Spiegel (1981).

[14] According to census figures, the number of African married people above 15 years was as follows: 1936—56%; 1951—54%; 1960—57%; 1970—49%; 1980—42%; 1991—38%; 2001—30% (author's calculation from various census reports, Statistics South Africa, Pretoria).

[15] A demographic surveillance site in northern east South Africa (Agincourt) also found an increasing mobility of women, although it appears at a lesser scale than that recorded in Hlabisa (differences in the way the surveys are constructed make comparisons difficult). See Kok & Collinson (2006).

Plate 1. Aerial photo showing the large informal settlement surrounding Isithebe Industrial park in 1999. Viewed alongside earlier photos, it reveals that the number of shacks grew tremendously in the 1990s, despite the shedding of jobs. This highlights the continued agrarian decline and the high rates of men and women's movement as well as demographic shifts, notably reductions in marital rates and smaller household sizes.

infections. In the 1980s, therefore, when the apartheid state implemented the first AIDS prevention campaigns, and as townships burned in protest against apartheid, the state's early anti-AIDS messages lacked any sense of legitimacy and health institutions were not geared to respond. Nevertheless, despite the importance of recognizing diverse causes of ill-health, I primarily consider sexuality.

Most residents of Mandenido, in fact, immediately raise questions of sexuality to emphasize AIDS' high prevalence in the area. The biggest single reason given for HIV's rapid spread is women's growing dependence on men at a time of industrial decline. One long term resident of the informal settlement, Mrs. Ndlela, explained the difficulties women face today. In doing so, she evokes the independent women who came to the area in the 1980s before the period of industrial decline:

> Before, people didn't rely on anyone, they were having money, now they have to rely on other people … some see this man today, this man tomorrow, and that man the following day …Today the situation pushes them to this thing …they are scared [of AIDS] but sometimes they just say that there is no such thing, they just ignore it…

Mrs. Buthelezi gave the following account in her house in Sundumbili. She is fifty years old and extremely hostile towards men, saying that boyfriends had let her down many times. She describes the difference between "prostitution" and what can be called the "materiality of everyday sex"—more informal links between money and sex whereby partners are considered as "boyfriends" and "girlfriends"[16]:

> MH: Did those people see themselves as prostitutes… ?
> Mrs. B: It's different let me say here at the township the level of unemployment is high. The girl comes from Nongoma looking for work, she can't find work and she gets a boyfriend who will pay her rent, another to buy her food, another one who is going to give her money, and the other will help her for transport. …the situation forces her…

These findings resonate with recent ethnographies from the Global South demonstrating how the informalization of work can propel women into a sexual economy, a scenario ultimately driven in some instances by World Bank/IMF- sponsored structural adjustment programs (Kempadoo and Doezema, 1998; Schoepf et al., 2000; Brennan, 2004). Yet, as Mrs. Buthelezi suggests, the embodied inequalities are rarely manifest as purely instrumental sex/money exchanges. Some partners can co-habit, claims can be made through evoking love, and participants can discuss sexual pleasure and physical attraction. Stories of sexual violence overlap with accounts of love letters and signs of affection (see Hunter, 2009).

Nor is it the case that all men are better off financially than women. Younger men in particular are often unemployed and frequently complain about their inability to attract women. Relations are therefore structured but not determined by material inequalities and this leads to complex patterns of sexual relations that cannot be easily summarized. For instance, a young woman might have a relationship with an older man but then have a younger boyfriend for "love". Moreover, there is great debate among women about what constitutes "true love": some argue that this can exist with an honest but poor man; others argue that love is more genuine with a rich man who has an ability to support a woman; still others argue that "true love" simply does not exist today in South Africa. Sexual relations therefore exist in tension with the embodiment of inequalities that play out in everyday lives in contested and fluid ways.

Conclusions

In the Western academy, health geography is characterized by the strong influence of humanism that directly opposed medical geography's positivism. Yet, in contrast, South Africa's stark racial–spatial inequalities engendered a relational understanding of space, one that moved over time in a more Marxist direction. Indeed, in conceptualizing health inequalities in South Africa an influential group of critical writers from the 1940s forefronted the country's uneven geography and racialized political economy. This body of research began with the Karks who first wrote about how racial segregation propelled syphilis, and was extended in the 1980s by Shula Marks, Neil Andersson, Randall Packard, and Ben Wisner who traced the dire health consequences of apartheid's racial capitalism. This South African literature therefore shows the importance of migration and apartheid to health and geography.

But South Africa also demonstrates how, after 1994, a more mobile capitalism fostered new racialized inequalities and gendered dependencies. While the male-migrant-infector-model became projected forward in the early period of AIDS this article has shown the importance of considering women's migration and the growth of shack settlements. Poor housing, industrial restructuring, and migration are not only, of course, features found in non-Western settings (on links between housing and AIDS in a variety of contexts see May/June 2008 *Solidarity Project* articles published on the web site www.champnetwork.org). Yet health geography has probably underemphasized how intersections between race, class, gender, and geography affect health.

In so far as South Africa can offer lessons, I noted earlier how Harold Wolpe played a pivotal role in rethinking race and class "articulations" in South Africa. Though Wolpe played little attention to gender, this model certainly allows room for its

[16] Much more ethnographic detail on the "materiality of everyday sex" can be found in Hunter (2002). The first quote is taken from this article. See also Selikow et al. (2002).

Plate 2. Residents walk to work, or to look for work, just before 7 a.m. at Isithebe, Mandeni. Behind is a row of imijondolo (roughly shacks) and in the background the factories of Isithebe Industrial Park.

consideration. Indeed, I have argued that South Africa provides a particularly extreme example of how massive labor market inequalities and gendered/racialized structures drove new connections between geography and AIDS. The country's long history of health geography, together with its development of conceptual tools to understand racial capitalism more broadly, can yield important insights that may be relevant elsewhere.

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