Journal of
Agrarian Change

Journal of Agrarian Change, Vol. 13 No. 1, January 2013, pp. 175–196.

Land, Labour and the Production of Affliction in Rural Southern Africa

BRIDGET O'LAUGHLIN

In the colonial vision of Southern Africa, rural people were seen as both underemployed and self-sustaining even while processes of commodification dependent on the exploitation of their labour were producing spatially and racially marked inequalities of wealth and consumption and related patterns of health and affliction. Affliction sometimes reflected denial of access to formal health provisioning, but it was also produced by the conditions of labour, including capital's largely successful struggle to externalize responsibility for the reproduction of its workers. This paper discusses various moments in the making of affliction in the region: the development of endemic tuberculosis, the resurgence of malaria, famine-related paralysis and HIV/AIDS. These cases illustrate how affliction has been shaped by the weight of long-term structural relations of class in the organization of labour and by the contingent outcomes of immediate political struggles. They suggest that efforts to improve health in Southern Africa today must address persistent structural patterns that underlie the causes of the incidence of disease; these are also relevant to questions of land reform.

Keywords: rural health, Southern Africa, gender, class, labour

INTRODUCTION

Debates over land in Southern Africa currently focus on both rights of ownership and the legitimacy of belonging. Some argue over whether or not large-scale enterprise forms of agrarian property are inherently more productive than existing or reconstructed smallholder production and thus more likely to fuel investment, growth and employment. Others insist that the efficiency debate is irrelevant or misleading. Land should belong to those who have been dispossessed, regardless of the economic implications of particular constellations of property relations. Yet, implicitly, what is at stake in these debates in an immediate and concrete way is the well-being of rural people – where and how they live, where and how they work. This may sound like a truism, yet it cuts particularly deep in Southern Africa, where historical patterns of political economy tied land, residence and labour in a particularly disjointed but systemic way, with consequences for nutrition, for health and for forms of affliction.

In the old developmentalist language of modernization theory, as in colonial rhetoric, there was not so much to explain as far as rural health in Africa was concerned. Health was thought to reflect a slow march forward from the fetters of tradition: life in perilous places burdened by superstitious beliefs, unsanitary water, rudimentary shelter and endemic disease. Historical research has challenged this image, documenting the ways in which colonial intrusions, particularly resettlement, land appropriation and forced cash-cropping and labour recruitment

Bridget O'Laughlin, ISS, P.O. Box 29776, 2502 LT Den Haag, the Netherlands. E-mail: brolaughlin@iss.nl. The author is grateful for the support of the Stellenbosch Institute for Advanced Study and IESE (Instituto de Estudos Sociais e Económicos, Maputo), for the comments of Julie Cliff, Pauline Peters and Henry Bernstein on earlier drafts, and for the comments of two anonymous referees and the co-editors of this special issue.

eroded pre-colonial practices of environmental management and integrated crop and livestock production that maintained nutritional security and protected both people and animals from disease (cf. Prins 1989).

Colonial capitalism alone did not produce affliction in Southern Africa. Disease invariably has multiple causes and pre-colonial Southern Africa was not a pristine paradise of healthy people. Yet new forms of working and resistance to them gave rise to the introduction of some new diseases and to the rapid spread of others. The immediate reasons why a particular individual falls ill are not the same as the reasons that determine the incidence of disease in a particular population. The former can often be cured by the timely intervention of a healer; the latter are generally of much longer duration and wider scale. The causes of affliction in Southern Africa reflect enduring processes that cross rural–urban divides and political boundaries. Although the linkages between these social processes and health may be difficult to identify or to regulate, let alone transform, it is important to try to do so.

The region today is at a point of rapid change in the way land is worked and livelihoods are organized in rural areas, with ramifications for conditions of health. In Mozambique, for example, both peri-urban residents and peasants are being displaced from their land for the opening of new coal-mines and the granting of long-term concessions to domestic, South African and multinational capital for food-crop and biofuel production. Tenants and farm-workers have been displaced with the conversion of ranches to game-farms in South Africa. Across the region, increasing numbers of out-grower schemes tie access to land to obligatory routines of cultivation and marketing. The casualization of formal-sector jobs that once provided fixed benefits and regular employment has also made more precarious the remittance of wages to rural areas and thus reduced the capacity to invest in agriculture or to cover food shortages with food purchases. Many of these changes are open to political contestation and negotiation, but in struggles over land civil society groups and communities tend to focus on legal ownership, job creation and financial compensation.

The objective of this paper is to bring the social determinants of health, disease and affliction more explicitly into discussions of land reform. To do this, it returns to the rich historical literature on the causes of disease in Southern Africa, to consider once more the consequences for rural health of changes in everyday conditions of life and ways of working in rural Southern Africa.

THE SOCIAL DETERMINANTS OF HEALTH

Epidemiologists generally accept that states of health have both biological and social determinants, but precisely how the two are related and their relative importance are subjects of recurring debate, with consequences for strategies of intervention (Kunitz 2007). Those emphasizing biological causes are concerned with statistically identifying the exact causes of individual exposure to disease and searching for universally applicable preventive and curative interventions. Those stressing the social determinants of disease are more holistic in approach, concerned with interventions that address the reasons why particular groups of people are more susceptible to disease than others.

Many of the debates about the determinants of disease are not really about the social versus the biological at all but, rather, reflect different ways of thinking about the relation between biological and social processes, one that puts the individual at the centre and another that begins with the society in which individuals live. Rose (2001, 427) argues that 'Aetiology confronts two distinct issues: the determinants of individual cases and the determinants of the rate of incidence.' If we focus on the first issue, sick individuals, we will try to protect high-risk

individuals against infections, whereas if we focus on the second issue we will seek to address the causes of incidence. The latter necessarily begins with analysis of social relations.

Rose's epidemiological thinking has been iconoclastic and creative because his emphasis on establishing the social causes of the incidence of disease is currently much less important in approaches to public health than what is somewhat misleadingly called the biomedical approach. Levinson (2000, 68) pointed out that 'Public health continues to concentrate on changing individual behaviours and exposures to pathology rather than targeting the conditions influencing those behaviours and exposures.' Models of child mortality, for example, clearly define proximate determinants of exposure to biological risk, whereas their intermediate social variables float in an unspecified multivariate space, 'the web of causation'. These models theorize individual risks and vulnerabilities, not social causes, and thus leave the latter ungraspable as a focus of intervention. In Nancy Krieger's words, they tell us nothing about the spider and how she makes her web (Krieger 1994).

The metaphor of the web can, however, inform our analysis of the social causes of affliction if we make the simplifying assumption that in the contemporary world there is a spider at its centre, not a single being but, rather, a social relationship: the contradictory, historically constituted and thus variable relation between capital and labour. Capitalist production does not require, nor does it assure, that the wage covers the cost of the reproduction of labour-power. The level of the wage, like the productivity of labour, is the outcome of constant struggle between capital and labour. In many colonial contexts, capital often did not pay even the basic costs of living of workers, and it organized work in ways that threatened their survival. They relied instead on a constant supply of fresh recruits. When workers were politically barred from organizing and subject to detention and/or physical punishment, employers could more easily push them to intensify their labour and extended the hours that they worked. The reproduction of labour-power always depends to some extent on non-commodified forms of work, historically often done by women and children. The definition of how the reproduction of labour-power is done is constantly contested in struggles that take place across and within communities and households, not just at the workplace.[1]

In analytically linking the social causes of health issues to the historically shifting and contested ways in which capitalist production externalizes many of its own conditions of production, I am indebted to Feierman's (1985) essay on 'the social costs of production'. Feierman historicizes and politicizes the boundary between what are considered to be necessary and unnecessary costs for the producer. In Feierman's work, and in that of others concerned with the history of social health, there is particular attention to how political struggles over regulation, taxation and social provisioning have shaped the ways in which the costs of production are variably assigned to government, civil society, the market and households. In his analysis of the emergence of the liberal welfare state, for example, Foucault (2000) emphasizes the diversity of approaches to social health in different European polities. State medicine in Germany was concerned with the observation and registration of disease, and the regulation of medical practice and knowledge. In France, the focus was the unhealthiness of cities, their areas of danger, both environmental and social, and the enclosure of urban areas by '*cordons sanitaires*'. In Britain, attention to the health of the working class was grounded in fear of proletarian unrest and concern with maintaining the productivity of labour in British industry.[2]

[1] Recognition of these forms of class struggle outside the workplace has not been a strong point in Marxist work, but feminists have pushed them into public and scholarly view.

[2] The government was particularly surprised by the physical failure rate of British working-class recruits for the imperial army at the time of the Boer War (Silver 2008, 17).

Foucault (op. cit.) and Canguilhem (2008) emphasized that areas of attention given to social health reflect the cultural and political framing of that which is viewed as normal or acceptable, as well as that which is pathological. Regulation is a two-edged sword, defining which costs of production must be absorbed by enterprises, or covered by processes of redistribution, and which costs are simply heaped on those who live and work in the orbit of capital. It is in this sense that Veitch (2007) looks at law as an instrument for setting the boundaries of the acceptable and in doing so both limiting and legitimating certain patterns of suffering. European polities defined affliction quite differently at home and in colonial contexts; in Southern Africa, it was construed differently for racially discriminated subjects and citizens. To understand both the causes and consequences of this, we must look at how specific historically constituted relations of class shaped the production of affliction.

AT THE CENTRE OF THE SOUTHERN AFRICAN WEB OF AFFLICTION

Pierson (2003) suggests that understanding the causes of events in social science often requires going beyond immediate triggers to look for those social forces that exert their pressure over long periods of time. This applies to the making of affliction in Southern Africa, where inequalities of health continue to reflect particular ways of subordinating rural livelihoods, family life and well-being to processes of commodification and proletarianization. These processes were contingent, shaped by resistance and opposition, and took different forms over time and in different areas. They generated no fixed predictable forms of affliction. Yet they intertwined relations of class, race and gender in ways that still underlie the social determinants of health in Southern Africa.

The distinctive historical features of capital accumulation in Southern Africa through much of the colonial period are captured by Amin's term 'Africa of the labour reserves' (Amin 1972, 504):[3] a politically coordinated regional system of spatial and social divisions, cutting across what are now national boundaries, controlling both the flow of labour and the conditions of work. This was almost an experiment in social engineering – how to establish a regime of capital accumulation without creating a politically powerful working class. The reserves marked the boundaries between different forms of production: estates and settler farms, labour reserves and peasant cash-crop production. Jurally defined relations of tenure regulated not just ownership of land, but the flow of labour: freehold, native reserve, public land. Black families lived and farmed in all these areas, largely organizing their own subsistence. Black, mainly male, workers circulated between centres of capital accumulation owned and managed by whites and their homes in rural areas. The definition of reserve areas and the activities allowed on them shifted over time in relation to changing political and economic pressures. Native reserve land could be redesignated, for example, as settler land, or peasants expelled from public land for the creation of a forest reserve, or tenancy declared illegal on settler land.

Residence, the kinds of work done, wages, patterns of consumption and forms of governance and citizenship were all racially discriminated. The drawing of these social boundaries was not principally about exclusion; above all, it defined unequal terms of inclusion. It regulated the relation between different forms of production, the flow of labour and the conditions of work and livelihood. The dependence of capital on migrant labour spatially structured relations of

[3] Amin also included parts of Eastern Africa that I do not consider here: Kenya, Uganda, Tanzania, Rwanda and Burundi.

class and gender in the region in a series of unstable dualisms: black and white, rural and urban, peasant and worker, the life histories of women and those of men, wage-labour and self-employment, customary and statutory law.

Dualism, interdependence and inequality were reflected in rural health. Southern Africa was an extreme example of displacing to 'native reserves' what Feierman (1985) called the social costs of production. Formal healthcare provisioning was oriented towards settler communities and maintenance of worker productivity on mines and plantations. Patterns of sexuality based on short- or long-term separation of conjugal partners were construed as a form of 'serial polygyny', not as a response to deprivation but as a 'traditional' norm. Neither wages paid to black workers nor income gained from crop production were sufficient to provide a secure and healthy life for many rural households. In both migrant labour and cash-cropping reserves, livelihoods depended on non-commodified work, done principally by women, for everyday provision of food and care. Morbidity and high child mortality reflected both malnutrition and overwork.

People do not simply agree to be engineered. A regime of accumulation based on exploitation is characterized by conflict, resistance and struggle. These also shape general conditions of health. In the case of Southern Africa, forms of resistance included mass migration, desertion from work and sabotage of cash crops, as well as organized work-stoppages and protests over prices. Women who bore the burden of weeding for both subsistence and commercial crops often ordered tasks to give priority to food production. Migrants on limited contracts did not always return to the labour reserves, but disappeared into the townships; rural women did not always either remain at home or limit their sexual contact to absent partners. Cycles of household formation and dissolution in rural areas, and conflicts of gender and generation within them, were linked to the ups and downs of wages, crop prices and labour recruitment.

Colonial governments mediated, not always successfully, the contradictions of the labour-reserve regimes. They regulated and sometimes organized the recruitment of workers and intervened in worker protest. They resettled populations to make them more accessible for crop marketing and surveillance. They used licensing to control the orientation of trade. They negotiated the interests of the different fractions of capital and political constituencies to which they were accountable. In Southern Africa, they were particularly responsive to the demands of settlers, including workers and small capital, for whom health figured as a justification for racial separation and exclusion. In urban areas across the region, the quality of housing and infrastructure was racially discriminated. From the beginning of the twentieth century, white and black South Africans lived in cities divided by a wide *cordon sanitaire*. Outlying urban locations, much like the rural labour reserves, were intended to isolate whites from the medical hazards of black life, an alternative to addressing the unsanitary living conditions considered acceptable for black people (cf. Swanson 1977).

Colonial governments were also expected to deal with sustaining the fractious whole; they were responsible for the long-term reproduction of labour and the environmental conditions for which individual capitalist enterprises refused to account. The colonial authorities were concerned with high mortality, declining fertility, the erosion of soils, the destruction of forest reserves and the disappearance of wildlife. Some policies adjudicated both conflicts between different capitals and the general sustainability of colonial regimes of exploitation. In enacting, for example, the 1913 ban on South African labour recruitment above the 22nd parallel, a boundary that still delimits the areas in which the rural population is most proletarianized, colonial governments were in part responding to the high rates of mortality among recruits from Malawi in the mines (Packard 1993). Yet they were also answering demands for labour from multinationally owned mines and plantations in (present-day) Zambia, Zimbabwe and

Mozambique, and to plans of metropolitan capital for establishing smallholder production of cash crops that could provide cheap industrial inputs. In establishing such boundaries between regions of recruitment, and between the conditions of health for settlers in centres of accumulation and those of the residents of rural labour reserves and black townships, colonial governments both facilitated exploitation and set its limitations. They normalized the inequality of states of health between black and white and between rural and urban, an illustration of what Veitch (2007) has called 'legitimation of suffering'.

The regional sway of this engineered mode of capital accumulation based on rural labour reserves, its racial dualism and the political dominance of South African capital within it were not inevitable. They arose from a conjuncture of particular historical circumstances, including early European coastal settlement, the strategic importance of Atlantic/Indian Ocean maritime routes in world trade, the near hegemony of a single colonial power, Great Britain, in the region, the decline of African trade-based kingdoms in the nineteenth century and the existence of extensive gold deposits that required a large industrial labour force for deep-shaft mining.

Today the labour-reserve system is no longer in place; it has been gradually eroded by its own contradictions and by wider international economic and political events. The term 'Africa of the Labour Reserves' no longer captures either descriptively or analytically the complexity of the political economy of the region. Following political independence and the transition to democracy in South Africa, racially defined degrees of citizenship have been legally abolished, as have controls on movement between country and city. There are now black capitalists, politicians and bureaucrats. The states of the region have extended provisioning of health and education far beyond the settler focus of the colonial period. Some countries of the region, particularly the wealthier ones, have extended universal social benefit schemes.

Regional labour flows follow no regular cycle of recruitment, work and repatriation. The majority of regional migrants are probably now undocumented and casually employed. Rural unemployment is currently high across the region; capital need not search far to find unskilled labour. The system of all-male hostel residence was eroding in South Africa even before the end of apartheid. In most South African mines, workers on permanent contracts organize their own residence, as do many of the large number of flexible casual workers contracted by and paid through labour brokers. The outcomes of these changes for patterns of migration and the organization of households are differentiated and unpredictable. Many miners from Lesotho have become weekend commuters. Some Mozambican miners have settled permanently in South Africa, while others practise long-distance polygyny, establishing permanent households in both South Africa and Mozambique (Lubkemann 2000, 2009; Farré 2009). Some rural women have struggled to become urban; others have chosen the relative autonomy that rural livelihoods provide for some; others have had no option but the poverty of low-wage and irregular casual labour. Young women in KwaZulu-Natal often straddle both the supportive rural homesteads of their parents and urban locations where they pursue jobs, experience and schooling (Mathis 2011). Each of these outcomes yields different patterns of nutrition, different health risks and different kinds of access to health facilities.

In many parts of the region, wages were never as important as peasant commodity production for rural incomes. Now, in some of the labour-reserve areas where rural people have been pummelled by redundancies in formal-sector jobs, as Zambia and Malawi were in the 1970s and 1980s and Zimbabwe is today, former migrants have rejoined rural households and there has been a growth in crop and livestock marketing (Moore and Vaughan 1994; Peters 2006; Scoones et al. 2010). Forest, sugar and tobacco plantations have extended smallholder contract-farming schemes.

Rural livelihoods are diversified and peasant production is highly differentiated, with conflicts over land rife in many areas and households more sharply divided between those who hire extra-familial labour and those who provide it. Off-farm wage-labour provides a complementary, differentiated but important role in peasant production. Peters (2006, 330) describes how in Zomba, an important cash-cropping area,[4] over the past 30 years the poorest quartile has increased its dependence on purchased maize, while increasing the proportion of income derived from wage-labour. Similarly, in the otherwise very different Limpopo region of Mozambique, still a migrant labour area, some women do casual labour for larger local farmers in order to buy Thai rice to eat, a crop that they themselves also cultivate. There, however, men continue to migrate, despite the declining possibility of finding regular jobs in the South African mines; remittances, savings and skills gained through successful labour migration continue to be an important source of agricultural investment for wealthier peasant households (UNAC field research undertaken in 2008).

The present complexity and social differentiation in rural political economy is thus not consistent with the simplifying ideal type of the labour-reserve economy. Yet beneath these changing forms, historically distinctive structural relations of class continue to shape the conditions of rural health in Southern Africa. They are embedded in the ways in which production is organized, in the functioning of markets that reinforce existing inequalities (particularly when neoliberal economic policies are dominant), in the routines of governance, and in the ways in which inequality is defined and understood.

There are four tendencies implicit in the ways in which class, gender and race came to be intertwined in Southern Africa that are of particular relevance to rural health today. The first is continuing reliance on the intensification of non-commodified production in rural areas to cover social costs of production, including nutritional security and health care.

The second is routine recourse to casual wage-labour, both by those who do it and those who hire it. It can be seasonal or cyclical, contractual or temporary, and is used in industry as well as services and agriculture. Recruitment of casual labour is embedded in the technical organization of tasks and the weakness of organized labour movements. The precariousness of casual work demands that workers have some other additional livelihood base. Doing casual labour can help poor rural farmers to defend a livelihood in times of crisis, but it can also prevent them from securing one.

Third is spatial and social dualism in the provisioning of formal health care, once maintained through the racial definition of residence and the establishment of legally defined public health boundaries, the *cordons sanitaires*, now reproduced through the working of the market and access to formal employment. Conditions of health in rural areas are framed in policy space as residual: that which government should deal with when and how it can, but in practice are left mainly to the caring work of women and to the initiatives of families and communities.

Fourth is a racialized understanding of the causes of suffering, locating them in the characteristics of those who are ill rather than in the relations of social inequality that constitute the context of affliction.

These tendencies emerge from the particular history of Southern Africa, but they are in no respect inevitable. Each is a political outcome of struggles that had and have contingent outcomes. To illustrate what that means, the following section examines the causes of four

[4] A marked dip in M/F ratios in the rural Malawi population in the age group from 20 to 29 years (83 men for 100 women, compared to 97 men for 100 women in the age group from 15 to 19 years) registered in the 2008 Census suggests, however, that young men's emigration still has some importance in the establishment of livelihoods in rural areas (see National Statistical Office of Malawi 2008).

different moments of affliction in Southern Africa, located in different places and very different conjunctures. They have been deliberately chosen because they illustrate in complementary ways the connections between the contradictory dynamics of structural relations of production and changing patterns of affliction.[5]

THE POLITICS OF AFFLICTION

Recalling Kunitz's (2007) account of opposing approaches to the relation between inequality and health, this paper is not looking for a model of the determinants of health that will allow us to establish predictive statistical correlations. Its concern is, rather, to understand broad structural patterns formed over time and across wide swathes of space that allow us to interpret evidence (including statistical evidence) and locate spaces of political intervention. We are looking, that is, for tools of analysis and interpretation, not of deduction. That we are able to do this in Southern Africa is largely the result of the work of an exceptional group of historians of health in Africa. The following accounts are not just cautionary stories about the past, but ways of thinking about the relation between land, labour, capital, the state and health in Southern Africa today.

Mine Workers, Rural Livelihoods, Land and Tuberculosis

The classic illustration of the relation between migrant labour and disease is the rapid and dramatically unequal spread of endemic tuberculosis in the region in the first decades of the twentieth century. The problem concerns how to explain the sudden rise in susceptibility among black workers and sharp differences in morbidity and mortality between different groups. Packard (1989a,b; see also Packard and Coetzee 1995) showed in detail how the explanation of black/white inequalities in the incidence of tuberculosis lay in the organization of mine-labour and the system of labour recruitment. Working conditions underground for black miners – hot, narrow, poorly ventilated shafts, hard physical labour with long shifts – made them vulnerable to tuberculosis, silicosis and pneumonia. White miners had skilled and supervisory tasks, were paid a family wage and lived with their families in towns. Black workers were crowded into compounds, where hostels were sometimes very hot and sometimes very cold, and lacked adequate water and sanitation facilities; rations were monotonous and in some mines very short.

Family housing was rejected by mine-owners because it was intended that most workers on the mines would remain as temporary circulating migrants. A large proportion of the mine-labour was drawn from other countries in the region, albeit declining since the mid-1970s (see Table 1).[6] If we take account of the limited size of their populations, we can see how important work in the South African mines was for its immediate neighbours: Lesotho, Swaziland and Botswana. In Mozambique too, migration to South Africa dominated the rural economy in the south, the least populated region and that designated as a South African labour reserve.

The burden of care in the reserves was increased by the repatriation of disabled or seriously ill workers. Regular medical controls assured that severely affected workers were sent home to

[5] I rely here almost entirely on secondary literature, particularly the superb work of Randall Packard. Only the Mozambican case is informed by my own participation in the research done on cotton production in Nampula and Zambezia provinces by the Centro de Estudos Africanos in 1979 and 1980.

[6] A reduction in mine-labour does not necessarily means a decline in total migration, but by definition undocumented migration is hard to estimate.

Table 1. The proportion of foreign workers in South African mines, selected years, 1904–2004[a]

Country[b]	*1904*	*1915*	*1946*	*1975*	*1994*	*2004*
South Africa	18,057	93,396	126,000	121,800	170,876	120,146
Mozambique	50,997	83,338	96,300	118,000	49,250	48,918
Botswana	531	2,950	7,000	16,600	10,939	3,924
Swaziland	492	4,910	5,500	7,200	15,101	7,598
Lesotho	3,340	12,355	38,200	85,500	87,248	48,962
Zambia, Zimbabwe and Malawi	4,550	1,148	32,400	13,500	n/a	n/a
Total	77,000	198,000	305,400	364,700	334,414	180,586
Percentage of foreign workers	76.4	52.8	58.7	66.6	48.9	33.5

Source: Selected from First (1983, 32–3); Crush and Dodson (2007, 439).

[a] Note that these figures may be omitting those casual workers who are hired by labour brokers.

[b] In this table, I have changed the names of countries in the colonial period to their present names. Years have been purposively chosen as well: 1915, shortly after the ban on recruitment north of the 22nd parallel; 1946, after the renewed recruitment from Central Africa during the Second World War; 1975, the year of Mozambican independence and Frelimo's temporary ban on mine-labour, and shortly after Banda's temporary withdrawal of Malawian miners after a plane crash in 1974; and 1994, the year in which South Africa's first democratic government was formed.

the countryside, and thorough physical examinations at recruitment centres prevented the ill from returning to the mines. Respiratory illnesses were not the only sources of disability: smallpox outbreaks, high rates of accidents, scurvy, meningitis, dysentery and venereal disease all returned with migrants to their home communities in South Africa and elsewhere in the region (Marks and Andersson 1992).

Herein lies another part of the tuberculosis puzzle addressed by Packard, a question of particular relevance for current discussions of land reform: the incidence of tuberculosis cases varied not only by race but also by the region of origin of the workers. Areas with similar exposure to tuberculosis had quite different levels of infection, morbidity and mortality, with the Eastern Cape being particularly badly affected at the beginning of the twentieth century and Mozambique notably less so, despite the long history of Mozambican labour in the mines (Packard 1989b, 99 ff.). Marks and Andersson (1992, 140) argue that in rural South Africa, 'The accelerating spread of tuberculosis, malnutrition and venereal disease in the reserves from the 1920s resulted from the conjuncture of the health hazards of the mining industry, the migrant labour system and low-wage urban economy with the simultaneous and connected impoverishment of the countryside.' They highlight the importance of the Native Lands Act in shaping the growing incapacity of rural people to produce adequate subsistence from the 1920s onwards. Here there is an enduring difference between South Africa and other labour-reserve areas in Southern Africa, where although settlers appropriated fertile irrigable land, enough was left under peasant cultivation to sustain food and livestock production.

The collective health of the labour force and hence its productivity mattered for mining capital, but it defined the socially necessary wage quite differently for the two racial segments of the labour force. The wages of white miners covered their collective health, including that of their families. For its black labour force, however, the Chamber of Mines depended on WENELA (The Witwatersrand Native Labour Organization), a recruitment agency set up and subsidized by the mines, which operated a vast network of recruitment posts across the region. Operating as a cartel, it regulated the wages of black workers across the mining industry and

maintained labour productivity through regular turnover of workers, rather than through improvement in working conditions. The impact of repatriation in general and tuberculosis contagion in particular on rural populations was not its concern. The British colonial government and the South African Republic were worried about the impact of conditions of recruitment to and work in the mines on long-term public health, but they consistently filtered their concern through their immediate political accountability to their constituencies.

The refusal of mining capital to internalize more of its own costs of production was maintained until the late 1960s, when the interrelated competition for skilled labour and growing militancy of workers led to both wage increases and eventual recognition of the NUM (National Union of Mineworkers). The NUM mobilized mining compound and hostel dwellers to push for both improvements in their job security and more stringent health and safety regulations (Buhlungu and Bezuidenhout 2008, 283).

Following the 1994 election and the formation of an ANC-led government, stagnating gold prices brought the mining industry into crisis, which it addressed by abandoning plans to build owner-occupied housing near the mines, pursuing mining opportunities outside South Africa, closing unprofitable mines, retrenchments and the subcontracting of many tasks to labour brokers (Crush and Dodson 2007,437). Table 1 shows a sharp decline in the number of miners between 1994 and 2004, but the figures can be misleading. They refer to formally registered miners, usually NUM members, employed directly by the mines and with access to health care and social benefits. About another third, many of them undocumented migrants, are employed by labour brokers, sometimes even for core mining tasks as well as non-core tasks such as underground construction and shaft sinking (Buhlungu and Bezuidenhout 2008, 276). Employment is precarious and income uncertain, and workers organize their own hostel-living, remit irregularly to the families left behind, and may return home when jobs fail or they fall ill. As for tuberculosis, despite decades of aggressive control campaigns, it has re-emerged since the late 1980s as the most important HIV/AIDS co-infection in the region (Harries et al. 2003, 116–18).

The unintended tragedy of tuberculosis illustrates all the core social determinants of rural affliction in the labour-reserve system. The boundaries of suffering were drawn quite differently for black and white in working and housing conditions in the mines and in access to health care for workers and families. The costs of care and food provision for families were borne by the intensification of women's non-commodified work in the rural areas. The labour reserves made it possible to organize an industrialized mining process, of the kind that usually requires a permanent labour force, on a casual albeit contractual basis. The support of the colonial government for mining capital was important and local chiefs had become agents of recruitment rather than resistance. The racial dualism of working-class politics until the 1940s was, however, arguably the most important social determinant of the rapid spread of tuberculosis.

Casual Labour and the Recurrence of Malaria in Swaziland

The same politically shaped boundary between those costs of production absorbed by mining capital and those left to households applied to the organization of farm labour, often with consequences for surrounding communities as well as for areas of origin. Christiani et al. (1990, 398) suggest that uncontrolled and unplanned use of insecticides and pesticides exacerbates diseases such as malaria, schistosomiasis, filariasis and trypanosomiasis by causing resistance to insect vectors while adding pesticide toxicity. Feierman (1985, 96) pointed out that in densely worked irrigation schemes, schistosomiasis is almost inevitable if employers do not pay for water sanitation, but largely avoidable if they do so. In a wonderful piece of detection in Swaziland,

Packard (1986) shows that the way in which class relations shaped health could be politically more complex than simple management refusal to follow safety guidelines.

Swaziland, Botswana and Lesotho were to some extent models for the South African 'Bantustan' experiment in giving the homelands increased administrative autonomy under 'traditional' chiefs. All three had royal families, recognized in treaties signed with the British, who had some deliberative powers under colonial rule and have maintained an important place in the politics of the three countries after their independence. All three were also exporters of labour to South Africa. In the period leading up to Independence, Britain was concerned, as in its other colonies in the region, to make Swaziland less dependent economically on South Africa. Nutritional vulnerability and increased malaria had been associated with settler occupation of large tracts of land in the temperate uplands (Packard 1986, 862). The colonial government did not wish to dislocate Europeans farms and ranches that had occupied a large proportion of the land with commercial potential, but it sought to open up new lowveld areas to sugar production, which was expected to be a much more important employer of labour than the settler farms had proven to be.

When in the 1950s, the CDC (Commonwealth Development Corporation) was considering opening sugar estates in the lowveld, it worried about the levels of endemic malaria among the potential labour force. The sugar estate expansion was preceded by 3 years of spraying, after which the parasite rates in children had dropped from 65 per cent to 2 per cent, a remarkable achievement. A 15-mile protective barrier was erected along the frontier to bar entry of infected people from Mozambique, which had no similar control programme. Official notification of cases fell from 7,850 cases in 1946 to fewer than 100 cases per year during the late 1950s and early 1960s, yet rose again to over 1,000 cases per year in the late 1970s (Packard 1986, 861).

Ironically, the development of the sugar estates had much to do with the recurrence of malaria that the colonial authorities so dreaded as a threat to labour productivity. Stagnant water pools in the irrigation system and poor housing and sanitation conditions for workers provided good breeding conditions for the mosquito vector. Water flows from Mozambique carried the kinds of anopheles that are the most efficient vectors into the irrigation canals. The development of new industries in the lowveld prompted the movement of people from malaria-free areas into the lowveld in search of work. Without any acquired immunity, they were very vulnerable to infection. Packard points out that the recurrence of malaria also depended on the presence of parasite carriers, individuals already infected. Patterns of labour recruitment on the sugar estates explain their presence.

Sugar was only one focus of capitalist development in Swaziland in the late 1950s and early 1960s. The development of mining, forestry and agricultural industries created growing demand for Swazi labour and upward pressure on wages. This furthered the development of a Swazi labour movement already nurtured by migrant workers' South African experience, and contributed to worker militancy on the sugar estates. There was a major strike by sugar workers in 1963, only a few years after the estates began operating. The wages paid on the sugar estates were competitive with those of other agricultural industries, but living and working conditions, including housing, sanitation, rations, family rations and working hours, were much worse (Packard 1986, 864). Seeking to hold down wages, the sugar estates employed Swazi men as field and factory workers, but during peak periods of labour scarcity they took on Swazi women and children for light field tasks and Mozambican migrants for cane-cutting and other heavy tasks. The latter were the infected individuals needed to complete the link between vector breeding and infected mosquitoes.

The Swazi workers began to push for a ban on the hiring of Mozambican migrants, viewed as less militant on wages and working conditions. The colonial government refused to do this,

despite warnings from health officials that the practice of hiring Mozambicans might lead to increased transmission of malaria (Packard 1986, 865). General restrictions on Mozambican labour were imposed after Swaziland's independence in 1969, but border controls did not entirely stop the movement of undocumented workers and estates did not co-operate in identifying them. The infection of migrant seasonal workers who came from malaria-free areas and had built up no immunity to the disease also increased the number of malaria cases. By the 1970s, reservoirs of infection among Swazi workers and their families had spread beyond the area of the estates, even to some parts of the middleveld that had been free from malaria since the 1950s.

The development of the sugar estates was not the only factor that contributed to the recurrence of malaria in Swaziland. Movement of population from the infected areas of the lowveld in search of jobs, increasing flows of refugees from Mozambique during the war in the 1980s, and the administrative weakness of malaria control programmes, were also important (Packard 1986, 866). What makes this case particularly interesting, however, is that the colonial state, despite the benign developmentalism of the immediate pre-Independence period, and contrary to advice from its own medical services, stood so clearly with capital in the political face-off between the Swazi sugar workers on one hand and the estate managers of the CDC and Lonrho on the other.

At stake here was the labour-reserve system. Hiring Swazi women and children at low wages for routine field tasks depended on the existence of poor peasant households, for whom providing casual work meant either the intensification of work, particularly by children, or the withdrawal of labour from their own agricultural production, both with nutritional consequences. In this case, it also made them malaria carriers. Similarly, recruitment of casual Mozambican cane-cutters willing to work for less than Swazi workers depended on their dislocation from their families in rural Mozambique. The Swazi workers demanding family rations and decent housing were asking for the family wage of the proletarianized worker.

The Swazi workers' form of protest was also shaped by a familiar pattern in the labour-reserve system – political division between different groups of workers by area of origin. They did not make a class demand for equal pay and benefits for equal work for all; instead, they demanded the exclusion of the Mozambican workers. Recruitment of Mozambican workers agreeing to work for lower wages depended on collusion between state and capital to maintain weak enforcement of the border controls required to maintain the 15-mile protective malaria barrier. A better solution both for workers and the wider Swazi population would probably have been admission of Mozambicans (many fewer would have been hired) as permanent workers receiving regular anti-malaria treatment.

The resurgence of malaria in Swaziland was an accepted but unintended consequence of opting for a system of profitability based on fragmentation of the labour process, recruitment of casual labour and a divided working class. It was only one of the recurrent political confrontations between organized labour, capital and the state (in the guise of traditional kingdom) that continue to mark Swazi history.

The Myth of the 'Subsistence Farmer': Konzo *Paralysis in Mozambique*

Northern Mozambique is a region where there were and are scattered plantations, particularly sisal estates, along the coast, but from the 1930s onwards the relation of rural people with capital was mainly established through cash-cropping. Labour and commodity markets functioned interdependently, however. Portuguese colonial authorities demarcated labour reserves in central Mozambique for mines and plantations along the Zambezi river (and intermittently allowed

Rhodesian farms and mines and Tanzanian sisal estates to recruit migrant labour in central and northern Mozambique). Until the 1960s, plantations in Mozambique employed both contract and forced labour, the differences between which were often not clear. In general, however, the colonial administration insisted on limiting contracts to periods of 6 months, to assure that men were not entirely absent from crop production.

The densely populated fertile areas of the Nampula and northern Zambezia provinces were reserved for the development of cash-cropping, particularly of cotton. The South African ban on mine recruitment above the 22nd parallel was occasionally breached in areas that lacked the conditions for commercial agriculture, such as Machaze (Lubkemann 2000), but it contributed to the creation of three flexibly demarcated regional variants of rural political economy in Mozambique: the south linked to South African migration; the centre combining short-term migration with food and cash-cropping; and the north dominated by out-grower cotton.

In the 1930s, Portugal was concerned with cheapening the cost of raw material for its growing textile industry. It employed the same model developed by the French and Belgians when plantation cultivation failed them: forced peasant cropping of cotton. Concessionary companies were given monopoly purchase rights within fixed areas and a profit guarantee in return for provision of inputs, marketing, transport and ginning. Companies owned no land, but their staff worked with local colonial officials to determine where farmers would locate their plots. Men were obliged to cultivate one hectare of cotton and women one-half hectare, based on the assumption that women were also accountable for food production. In fact, women were doing most of the weeding in all these fields. Those who defaulted on the recommended number of timely weedings were whipped or beaten. Men who produced under 400 kg of cotton lost their status as 'farmers' (*agricultores*) and were subject to forced labour (Isaacman and Chilundo 1995, 167).

Cassava became the principal staple in the coastal zones, where cotton did not grow well, but where men were recruited for 6-month contracts on the sisal estates. The sharp decline of sorghum and increasing dependence on cassava as the main staple crop in Nampula resulted principally, however, from the expansion of cotton production. Cotton heightened the stress of the hungry time between the exhaustion of the previous year's food reserves and the maturing of new crops. Women also had less time and energy for processing and preparing food, and children worked more intensively in the fields. Cotton set off continuing confrontations between women and extension agents over which plots would be weeded when and by whom. These conflicts between the intensive early weeding demanded by cotton and by food production were recognized by the colonial authorities and the cotton companies, who insisted that cassava be part of the rotation cycle.

As Moore and Vaughan (1987, 540) suggest for Zambia, the rapid growth of cassava can be seen as a positive response by women to labour constraints in agriculture. Yet its labour-saving properties apply mainly to the timing of tasks across the agricultural year, not to large total reductions in women's work. To turn cassava into an edible flour requires a great deal of processing labour, done exclusively by women. It is peeled, chipped, soaked, fermented and dried for later pounding into flour or is sold along the road and in local markets in chip form. The planting of cassava maintained women's greater responsibility for weeding and eased the labour bottlenecks that threatened the profits of the cotton companies.

The low-yield, labour-intensive cotton production system in Mozambique was, as elsewhere in Africa, in the process of restructuring before the end of the colonial period. Cotton was being withdrawn from low-yield areas and input-intensive methods were being introduced both to peasants and on new settler farms. After Independence, the Frelimo government

attempted to expand the cotton production areas again, for reasons similar to those that motivated the colonial government: to feed the development of a domestic textile industry.

In 1981, Nampula was hit by an outbreak (eventually over a thousand cases) of a strange irreversible spastic paralysis of the legs (Cliff 2009). It affected principally two districts, Memba and Mogincual, already afflicted by 2 years of drought. These coastal districts have marginal soils and were not prime cotton-growing areas; cashew nuts and dried manioc were the main cash crops and men migrated for short-term agricultural jobs on nearby plantations or to the growing port city of Nacala. Because the paralysis affected women and children more than men and certain families more than others, the public health team sent out by the Ministry of Health at first thought they were dealing with an infectious disease (Cliff 2009). However, testing showed that it was *konzo*, a form of cyanide poisoning resulting from the high concentration of linamarin, a cyanogenic glycoside found in the edible leaves, peel and roots of the cassava plant (Nhassico et al. 2008).

The cause of *konzo* is excessive consumption of unprocessed or poorly processed cassava. This occurs particularly during droughts, for a number of reasons (Nhassico et al. 2008). There is always linamarin in cassava, particularly the bitter drought-resistant varieties, but the concentration increases when the plant is under stress. During periods of drought, when households stocks have been consumed, women are forced to cut down the preparation time, both because they themselves are hungry and weak and because there is nothing else to eat. The risk of *konzo* is reduced by variety of diet, but cassava is famine food precisely because it resists drought better than other crops. Yet there are various anomalies that suggest that the severity of this outbreak, like the famines studied by Sen (1981), was a matter of access as well as supply and of politics as well as markets.

First is the timing of the outbreak. Periodic drought is common in this region and Mozambicans know the risks of bitter cassava; *konzo* is an irregular event. Mozambican crop-marketing figures for cotton lint and dried cassava (Nampula is the biggest producer of both) did not show a fall in these years.[7] War was not yet the reason; in 1980 and 1981, Renamo was not active in this area. Second is the selectivity of the outbreak: Why did those families affected prove to be the poorest in their communities? At the time, health researchers thought that the outbreak had something to do with trade, and indeed in retrospect we can see more clearly in what respects this was so.

At the time, Frelimo was a socialist party, explicitly choosing planning as a way of reorienting the colonial economy and tightly restricting the autonomy of the market and its agents. In 1979, the government announced a 10-year economic plan for rapid growth based on investment in state farms and industry. As part of this process, consumption was to be restricted (all would 'pull in our belts'), particularly in the countryside, where the planners expected that the peasantry could survive through its own 'subsistence production'. Accordingly, trade policy was designed to direct the flow of consumer goods to wage-workers and to concentrate marketed surpluses in the hands of the state. In the event, the state farms did not deliver either the food or the export crop surpluses demanded by the plan, so state control over peasant surpluses became critical, not just for export earnings but also to feed the cities, the army, students at boarding-schools (much of post-primary education in rural areas) and farm-workers. Consumer goods were directed to rural districts at harvest time to capture crop surpluses, but were otherwise almost entirely unavailable. Road controls were set up to assure that movement of food between districts was allowed only with written permission from provincial

[7] See http://faostat.fao.org/site/339/default.aspx (accessed 10 December 2011). These are government-provided figures in constant values.

governments. Money became increasingly valueless in official trade, and inevitably parallel markets developed.[8]

In this context, coastal districts such as Memba and Mogincual that had been migrant-labour reserves and are normally food-importing, and particularly households that depended on occasional wage-labour to be able to buy food to supplement their own insecure production, were vulnerable to *konzo*. They did not have accumulated surpluses of either cassava or other crops that would allow them a varied diet; nor could they acquire them at the controlled prices of official trade. Frelimo's policies were based on the notion of 'a subsistence peasantry': the belief that the peasantry could always feed itself, that colonial forced labour and cropping had kept the rural population from becoming structurally dependent on the market, and that there was no systematic relation between labour and food markets.

The Frelimo strategy of accumulation was not intended to starve the peasantry; it simply assumed that with land and enough of their own labour, the peasantry could always make do. Frelimo did not see that the importance of markets in everyday subsistence derived from long-term changes in the organization of livelihoods in rural Nampula, changes not easily written out by the stroke of the planner's pen. Nor did it appreciate the differentiation within and between households. It was shocked to find that the high incidence of *konzo* among women and children in poorer households resulted from a nutritional deficit. Politics, not drought, was arguably the most important cause of *konzo*, politics in which the rhetoric of socialist development was infused by the premises of the labour-reserve regime. Socialist revolution is necessarily a process, not a single moment, but in the case of Mozambique it would have been important to recognize from the outset that suppressing markets could not in itself free rural livelihoods from dependence on them. Today, under a new explicitly capitalist regime of accumulation, there are still Frelimo politicians in Mozambique who claim that rural poverty will be solved by peasants working harder.

Migrant Labour and the Severity of the HIV Epidemic in South Africa

In a recent editorial in the *South African Journal of Medicine*, Fleischer et al. (2010, 32) raised an important, if controversial, concern. Spending on HIV treatment constituted about 13 per cent of the government budget for health in 2009–10 and the proportion is expected to rise as the number of infected patients needing anti-retroviral drugs (ARVs) grows. They put the issue squarely: 'What is the impact of this massively scaled-up spending on HIV treatment on the public health system? Is it possible that increased funding to meet the government's 80 per cent goal will displace (or "crowd out") resources critically needed to meet other pressing health priorities?'

They noted that there is already some evidence of such 'crowding out' of particular services for other chronic diseases, an ethically, politically and probably legally unacceptable outcome. They argued that increasing the overall health budget should be possible in South Africa and that there are ways of determining relative shares of health spending more justly. Nonetheless the question that they raised – the impact of the expanding costs of HIV/AIDS treatment – inevitably brings to the fore the issue of HIV prevention and thus the related and still unresolved question of causality.

According to the National Strategic HIV and AIDS Plan for 2007–11, HIV/AIDS is a generalized epidemic in South Africa (SANAC 2007, 22). From a very low figure in 1990

[8] A study done in 1982 in northern Zambezia (Mackintosh 1985) showed that the most important agents buying in parallel markets were state farms, the army in Nampula and the provincial government.

Table 2. HIV+ prevalence by racial category, 2008

Population group	*HIV+ (%)*
African	13.6
White	0.3
Coloured	1.7
Indian	0.3

Source: HSRC (2008, 79).

(under 1 per cent), the antenatal prevalence rate grew rapidly until 2005, appearing now to have reached a plateau, but at a very high level, just under 30 per cent (ibid.). There is, however, considerable regional variation in incidence within South Africa. The highest antenatal prevalence in 2005 was in KwaZulu-Natal (39.1 per cent) and the lowest in the Western Cape (15.7 per cent) (ibid., 26). In 2008, HIV prevalence was 25.8 per cent among 15–49-year-olds in KwaZulu-Natal, closely followed by Mpumalanga at 23.1 per cent, but only 5.3 per cent in Western Cape and 9 per cent in Northern Cape (RSA 2010, 72). In some rural districts of KwaZulu-Natal, antenatal prevalence was over 40 per cent in 2008 (ibid.), but it was 10 per cent in rural districts of the Western Cape in 2005 (SANAC 2007, 27). The most striking divergence is, however, that between racial groups (Table 2).

The rapid spread of the HIV/AIDS epidemic and its tenacity were not predicted in the late 1980s. South Africa is a relatively wealthy country, with a better health system than many other countries in the region. Some explanations of the severity of the epidemic focus on the inaction of the government and Mbeki's denialism, but these do not explain adequately what there was to deny, nor the unevenness of the epidemic. There is another unspoken but important question here: Why is there such difference in rates of prevalence for different population groups? Is there a reason why rates are particularly high in KwaZulu-Natal? Why is the rate of prevalence so much higher for black South Africans than for other groups?

In the HIV/AIDS literature on South Africa, explanations of the high incidence of HIV among black South Africans are often reduced to describing suspect behaviours and beliefs, particularly 'traditional' patterns assumed to be handed down in some way from the past. Delius and Glaser (2004) provide a useful critique of those attempts to derive the causes of the high incidence of HIV in KwaZulu-Natal directly from the importance of polygyny in Zulu culture or from the destabilizing impact of labour migration. They then proceed, however, to suggest that male violence towards women is rooted in the traditional age-set system and its link to power in the pre-colonial Zulu political system (Delius and Glaser 2004, 94).

The strategies of prevention that follow from this approach have focused on changing the behaviour, particularly the sexual practices, of black South Africans. In Rose's terms, the focus of prevention has been the particular individuals who are at risk of infection or infecting others, a very broad target in a generalized epidemic. Most people in South Africa are by now quite aware of AIDS, but prevention strategies based on persuading people to change their sexual behaviour have not been very successful. The failure of prevention programmes has provoked a round of thoughtful and sympathetic reflection, particularly on the divergence between the ways in which prevention programmes construe their intended subjects, and the way in which those afflicted understand (or refuse to understand) what is happening to them (see, e.g., Fassin 2004; Steinberg 2008).

The problems with current strategies of prevention go beyond the ways in which their messages are lost in translation, however. Their underlying assumptions reduce the social

determinants of HIV/AIDS to the cultural and social locations of those who are ill, rather than to the broader social relations through which those locations are constituted, construed and lived. If we follow Rose (2001), our first question should not be 'What is it about black South Africans?' or 'What is about the Zulu?' We should rather begin by asking 'What it is about social relations within South African society that has given rise to such a rapid but unequal progression of HIV/AIDS in the past 20 years?'

Among those who begin with this latter question, there is a broad consensus that the context of impoverishment, disenfranchisement, rapid urbanization, labour migration, displacement and conflict that led Marks (2002) to refer to AIDS in South Africa as an 'epidemic waiting to happen' matters, but the question of how it matters remains subject to debate.

An historically specific response is given by Mark Hunter (2007, 2010a,b). He suggests that to understand the causes of the severity of HIV/AIDS today, and the particularly high rates of HIV prevalence in KwaZulu-Natal, we must recognize that the apartheid labour-reserve system based on periodic male migration between country and city is no longer in place. He argues that patterns of intimacy have changed radically over the past 60 years, as linkages between rural and urban areas and ways of living and working in the country and the city have shifted. Unemployment and casualization of labour have shaped these new forms of residence and migration (including the growing mobility of women), have exacerbated inequality of income in the townships, and have contributed to a dramatic decline in marriage rates between 1951 and 2001 (Hunter 2010b, 92). Hunter grounds his argument in his research in 'Mandeni', a Durban township that over the years has drawn different kinds of migrants from different places and absorbed them in different ways, and has one of the highest rates of HIV prevalence in the country. Although Hunter focuses on an urban setting, his account of constant movement of both women and men between Durban and rural areas obliges us to see densely populated KwaZulu-Natal not as a traditional backwater, but as a particularly busy crossroads in lives made by combining the rural and the urban.

Hunter does not challenge the idea that sexual networking has something to do with the rapid spread of AIDS in 'Mandeni'; nor does he claim that multiple sexual partnerships are simply a direct response to poverty, with women selling sex as a commodity; nor does he deny that Zulu *isoka* idioms of youth and masculinity celebrate sexual subordination of women (Hunter 2004). Rather, he helps us understand that despite the idioms of tradition in which they are couched or justified, these are new forms of intimacy shaped by the slow structural demise of the old male-migrant system; by new flexibility in residence and movement post-apartheid; and by post-1994 ANC neoliberal employment policies that emphasize job creation, but have facilitated subcontracting and informality, attended little to working conditions in the jobs thus generated.

Although the social epidemiology of any disease is complex, Hunter's emphasis on changing patterns of employment, migration and urbanization allows us to see that, methodologically speaking, the province is not a good unit of analysis for understanding patterns of HIV prevalence in South Africa. Although the rate of prevalence is indeed much lower in the Western Cape than in KwaZulu-Natal, there is much heterogeneity within the Western Cape. In 2005, the prevalence rate was over 30 per cent in the urban township of Khayalitscha (SANAC 2007, 26–7), about the same as that of the Eastern Cape, from whence many of Khayalitscha's residents migrate, and not so different to that of KwaZulu-Natal.

Hunter's nuanced analysis of new forms of intimacy and the spread of HIV/AIDS provides no comforting answer to the questions raised by Fleischer et al. (2010) about the sustainability of ART provision in South Africa. If the extremely high rates of HIV prevalence in rural districts and informal urban settlements of KwaZulu-Natal have to do with unemployment and

informalization, they cannot be attributed to Zulu cultural exceptionalism, regardless of how often a distinctive Zulu sexuality is proclaimed or justified. Hunter provides a convincing analysis of the connections between the severity of South Africa's HIV/AIDS epidemic and the crumbling of the male-migrant system, and of the apartheid divide between urban township and rural areas. Yet at the same time the broader political and economic space to which he brings HIV/AIDS is one in which aspects of the labour-reserve regime are still important.

First is the increasing importance of casual labour, both through the loss of formal-sector jobs in manufacturing and the rise of labour brokers, particularly in mining and construction. How precisely the casual worker can construct a livelihood without a living wage is left to the worker and his or her family to answer, some of which is described in Hunter's study of 'Mandeni'. That family may be living in an informal settlement or rural area within South Africa, but they may also be in Zimbabwe or Mozambique. Some casual workers are still, by necessity, circular labour migrants. As Hunter points out, HIV/AIDS is thus relevant to political debates on ANC employment policies, not just their broad orientation (neoliberal or not), but the detail of regulating brokers, holding employers to paying equal wages for the same tasks or demanding healthcare coverage for casual workers. Migration reform is also relevant. A cross-class alliance has pushed government and international pharmaceutical companies to extend access to ART (Nattrass 2004, 2007; Robins and Von Lieres 2004), and Hunter's analysis leads us to think that there is a wider political terrain for this alliance to take on.

Second, the current structure of health provisioning in South Africa continues to be dualistic and unequal. Although it is now based on class rather than the racial divides of the labour reserve, the functioning of healthcare markets makes it difficult to distinguishing between them. While there have been many improvements in public health care since 1994, and the ANC government has committed itself to the construction of an equitable national health system, the quality of health provisioning remains sharply divided in South Africa between public and private (Table 3).

Private schemes, with coverage limited to those in formal employment or those who can afford to pay, absorb 46 per cent of health expenditure but cover only 15 per cent of the population (Coovadia et al. 2009, 10). The outcome is extremely high case-loads in government health facilities, particularly hospitals and particularly in rural areas (Benatar 2004). Physical separation of residential areas and the pass system were the *cordon sanitaire* of apartheid (Swanson 1977), but formal jobs with medical insurance schemes have similar outcomes today – physical separation and different qualities of treatment for different groups of people.

The residual quality of care for those not covered by insurance has implications for HIV/AIDS prevention in a number of respects. HIV is usually an inefficient virus, not easily transmitted (Stillwaggon 2002, 1–3). To reduce the rate of incidence in the population as a

Table 3. The structure of health provisioning in South Africa, 2005

Sector	*Expenditure per head in 2005 (rand)*	*Percentage of population covered*
Private-sector medical scheme and out-of-pocket	9,500	15
Private-sector out-of-pocket for primary care; public-sector for hospital care	1,500	21
Government primary care and hospital services	1,300	64

Source: Coovadia et al. (2009, 10).

whole, it important to address the range of causes that contribute to the probability of infection. For women in particular, these include a number of treatable diseases, including STDs (sexually transmitted diseases) and schistosomiasis, and for everyone other diseases that undermine the immune system. Maternal transmission to infants in childbirth is clinically controllable. Needle prick is a source of direct transmission. ART is a form of prevention because it reduces the probability of transmission by lowering the viral load; this requires clinical monitoring (Hargrove 2008).

Current government policy outlined in a 2011 Green Paper (RSA 2011) is to move towards a universal National Health Insurance scheme based on private/public collaboration. The Green Paper recognizes that this will require improvements and extensions to the public-sector provisioning of health services. It is unlikely that anything other than a radically redistributive restructuring of health provisioning could address the existing divide in access to and quality of care. Fleischer et al. (2010) are right to question the long-term political and moral basis for sustaining general provisioning of ART; their concern also applies to the underlying organization of public health as it now exists. A political assault on private insurance schemes will require a confrontation with both healthcare capital and the consumption patterns of the middle class. All this suggests that while redistribution of land is an important question in its own right in South Africa, the current politics of land mask a series of other thorny and fundamental redistributive questions. As all studies of existing experiences of land redistribution and restitution have shown, it takes much more than land and labour to make a healthy rural livelihood. What is needed goes beyond extension systems, education, health facilities and social support to the quality of work itself.

CONCLUSION: CAPITALISM, LABOUR REGIMES AND THE POLITICS OF AFFLICTION IN SOUTHERN AFRICA

Diagnostically, it may seem common sense to make the person who is ill the centre of enquiry and to locate the reasons why people fall ill in their individual characteristics: cultural, psycho-social or biological. Yet if we do so, it is only by chance or instinct that we come upon an analysis of the broader social relations formed over long periods of time that includes both those who are ill and those who are not. Identifying the structural causes of affliction will not allow us to find quick solutions for cases of individual suffering, but should help us to understand why some things work, why others do not and what is missing entirely from approaches to disease.

In the case of Southern Africa, the spider at the centre of an enduring web of affliction has been a particular gender and racially inflected way of structuring capitalist relations of class: a system of accumulation of capital dependent on the political maintenance of rural labour reserves that were sources of both migrant labour and agricultural commodities. The endemic struggle between capital and labour over how the real costs of capitalist production are paid and by whom extended far beyond the workplace and the sphere of formal state regulation, to confrontations in markets over the prices of commodities and to conflicts within communities and households over work, subsistence, money, mobility and sexuality.

The classical colonial system of male circulatory migrant labour, temporary urban residence and rural labour reserves has ceased to dominate Southern Africa. Yet various characteristic tendencies of the labour-reserve system remain. The labour of women in rural areas is counted on to cover the social costs of production, particularly for nutritional security and health care. Rural household production sustains casual labour, but in so doing contributes to the dualism of livelihoods that makes it difficult to organize around class demands for better wages and

working conditions. The spatial and social separations, the *cordons sanitaires* and pass laws, that limited provisioning of formal health care beyond core urban areas have now been relaxed, but the commodification of health care and the prevalence of casual employment reinforce limited access and compromise quality in rural areas. A racialized understanding of the causes of illness has lost its legitimacy, but the tendency remains to ascribe affliction to the characteristics of those who are ill, or to expect that rural people have a different threshold of suffering.

The four cases discussed in this paper illustrate how these tendencies of the labour-reserve regime have contributed to the making of affliction in rural areas. Yet they also show that these outcomes were contingent, politically shaped, and not necessarily expected or desired. Mine-owners responded to black workers' demands for higher wages with the formalization of the oscillating migration system. They did not intend to make tuberculosis endemic in rural Southern Africa; they just did not care very much as long as it did not endanger their supply of fit workers. The British colonial authorities in Swaziland did not intend to undercut all the work of their ambitious anti-malaria programme by allowing the plantation managers to hire undocumented Mozambican cane-cutters on short-term contracts; they just wanted their sugar development scheme in the lowveld to be a financial success. The socialist government in Mozambique attempted to use its market monopolies to restrict consumption and foster accumulation of industrial capital. It did not foresee that this could bring poor peasants in Nampula to the edge of famine. Whether or not HIV/AIDS decimates rural communities in South Africa will in part depend on whether a cross-class alliance pushes for a redistributive reorganization of health care.

The varieties and forms of affliction in Southern Africa can thus not just be read off the exigencies of capital. Yet the phrase 'the production of affliction' is used here advisedly. Contemporary forms of affliction cannot be understood without locating them within characteristic, enduring and historically specific ways of organizing capitalist production in Southern Africa. Returning once more to Rose (2001), to be able to determine effective forms of intervention, epidemiology must address the causes of the incidence of disease, not restrict itself to the experience of individual suffering that the clinical practitioner is ethically bound to address. All webs of causality reflect the histories of particular places within them and outcomes are contingent, complex and diverse. The broad dynamics of the struggle between capital and labour over the terms of commodification and proletarianization in Southern Africa have nonetheless structured this diversity in ways that matter for understanding points of resistance, and possibilities of change. If we allow the politics of health to do no more than follow the shifting effects of structural contradictions in the labour-reserve system – if we restrict ourselves to treating those who are already ill, or to finding palliative ways of living with affliction – then, indeed, we do no more than accept the boundaries of suffering.

REFERENCES

Amin, S., 1972. 'Underdevelopment and Dependence in Black Africa – Origins and Contemporary Forms'. *The Journal of Modern African Studies*, 10 (4): 503–24.

Benatar, S.R., 2004. 'Healthcare Reform and the Crisis of HIV and AIDS in South Africa'. *New England Journal of Medicine*, 351 (1): 81–92.

Buhlungu, S. and A. Bezuidenhout, 2008. 'Union Solidarity under Stress: The Case of the National Union of Mineworkers in South Africa'. *Labor Studies Journal*, 33 (3): 262–87.

Canguilhem, G., 2008. 'Health: Crude Concept and Philosophical Question'. *Public Culture*, 20 (3): 467–77.

Christiani, D., R. Durvasula and J. Myers, 1990. 'Occupational Health in Developing Countries: Review of Research Needs'. *American Journal of Industrial Medicine*, 17 (3): 393–401.

Cliff, J., 2009. 'An Orphan Disease in Mozambique'. In *The Practice of International Health, A Case-Based Orientation*, eds D. Perlman and A. Roy, 70–87. Oxford: Oxford University Press.

Coovadia, H., R. Jewkes, P. Barron, D. Sanders and D. McIntyre, 2009. 'The Health and Health System of South Africa: Historical Roots of Current Public Health Challenges'. *The Lancet*, 374 (9692): 817–34.

Crush, J. and B. Dodson, 2007. 'Another Lost Decade: The Failures of South Africa's Post Apartheid Migration Policy'. *Tijdschrift voor Economische en Sociale Geografie*, 98 (4): 436–54.

Delius, P. and C. Glaser, 2004. 'The Myths of Polygamy: A History of Extra-Marital and Multi-Partnership Sex in South Africa'. *South African Historical Journal*, 50 (1): 84–114.

Farré, A., 2009. 'Formas de Investimento das Poupanças no Local de origem por Parte dos Emigrantes do Sul de Moçambique. O Caso do Distrito de Massinga (Inhambane)'. In *II Conferência do IESE, Dinâmicas da Pobreza e Padrões de Acumulação em Moçambique*. Maputo: IESE.

Fassin, D., ed., 2004. *Afflictions. L'Afrique du Sud, de l'Apartheid au SIDA*. Paris: Karthala.

Feierman, S., 1985. 'Struggles for Control: The Social Roots of Health and Healing in Modern Africa'. *African Studies Review*, 28 (2–3): 73–147.

First, R., 1983. *Black Gold, the Mozambican Miner, Proletarian and Peasant*. Brighton: Harvester Press.

Fleischer, T., S. Kevany and S.R. Benatar, 2010. 'Will Escalating Spending on HIV Treatment Displace Funding for Treatment of Other Diseases?' *South African Medical Journal (SAMJ)*, 100 (1): 32–4.

Foucault, M., 2000. 'The Birth of Social Medicine'. In *Power,* Vol. 3 of *Essential Works of Foucault 1954–1984*, 134–56. New York: The New Press.

Hargrove, J., 2008. 'Migration, Mines and Mores: The HIV Epidemic in Southern Africa'. *South African Journal of Science*, 104 (1–2): 53–61.

Harries, A.D., N.J. Hargreaves and A. Zumla, 2003. 'Tuberculosis and HIV Infection in Sub-Saharan Africa'. In *The Return of the White Plague: Global Poverty and the 'New' Tuberculosis*, eds M. Gandy and A. Zumla, 112–24. London: Verso.

HSRC, 2008. *South African National HIV Prevalence, Incidence, Behaviour and Communication Survey, 2008. A Turning Tide Among Teenagers?* Cape Town: HSRC Press.

Hunter, M., 2004. 'Masculinities, Multiple-Sexual-Partners, and AIDS: The Making and Unmaking of Isoka in Kwazulu-Natal'. *Transformation: Critical Perspectives on Southern Africa*, 54: 123–53.

Hunter, M., 2007. 'The Changing Political Economy of Sex in South Africa: The Significance of Unemployment and Inequalities to the Scale of the AIDS Pandemic'. *Social Science and Medicine*, 64 (3): 689–700.

Hunter, M., 2010a. 'Beyond the Male-Migrant: South Africa's Long History of Health Geography and the Contemporary AIDS Pandemic'. *Health and Place*, 16 (1): 25–33.

Hunter, M., 2010b. *Love in the Time of AIDS: Inequality, Gender, and Rights in South Africa*. Bloomington, IN: Indiana University Press.

Isaacman, A. and A. Chilundo, 1995. 'Peasants at Work: Forced Cotton Cultivation in Northern Mozambique 1938–1961'. In *Cotton, Colonialism, and Social History in Sub-Saharan Africa*, eds A. Isaacman and R. Roberts, 147–79. Portsmouth, NH: Heinemann.

Krieger, N., 1994. 'Epidemiology and the Web of Causation: Has Anyone Seen the Spider?' *Social Science and Medicine*, 39 (7): 887–903.

Kunitz, S.J., 2007. *The Health of Populations: General Theories and Particular Realities*. New York: Oxford University Press.

Levinson, R., 2000. 'Issues at the Interface of Medical Sociology and Public Health'. In *Modernity, Medicine and Health: Medical Sociology towards 2000*, eds G. Scambler and P. Higgs, 66–83. London: Routledge.

Lubkemann, S.C., 2000. 'The Transformation of Transnationality among Mozambican Migrants in South Africa'. *Canadian Journal of African Studies*, 34 (1): 41–63.

Lubkemann, S.C., 2009. 'From Circular Migrants in the Mines to Transnational Polygynists in the Townships: A Century of Transformation in Central Mozambican Male Migration Regimes (1900–1999)'. *International Migration*, 47 (3): 51–92.

Mackintosh, M., 1985. 'Economic Tactics: Commercial Policy and the Socialization of African Agriculture'. *World Development*, 13 (1): 77–96.

Marks, S., 2002. 'An Epidemic Waiting to Happen? The Spread of HIV/AIDS in South Africa in Social and Historical Perspective'. *African Studies*, 61 (1): 13–26.

Marks, S. and N. Andersson, 1992. 'Industrialization, Rural Health, and the 1944 National Health Services Commission in South Africa'. In *The Social Basis of Health and Healing in Africa*, eds S. Feierman and J. Janzen, 131–61. Berkeley, CA: University of California Press.

Mathis, S.M., 2011. 'Disobedient Daughters? Changing Women's Roles in Rural Households in KwaZulu-Natal'. *Journal of Southern African Studies*, 37 (4): 831–48.

Moore, H. and M. Vaughan, 1987. 'Cutting Down Trees: Women, Nutrition and Agricultural Change in the Northern Province of Zambia, 1920–1986'. *African Affairs*, 86 (345): 523–40.

Moore, H.L. and M. Vaughan, 1994. *Cutting Down Trees. Gender, Nutrition, and Agricultural Change in the Northern Province of Zambia, 1890–1990*. London: James Currey.

National Statistical Office of Malawi, 2008. 'Table 5: Population de-facto by 5 Year Age Groups and Sex for Urban and Rural Areas at National Levels'. In *Population and Housing Census*, http://www.nso.malawi.net/ (accessed 18 March 2012).

Nattrass, N., 2004. *The Moral Economy of AIDS in South Africa*. Cambridge, UK: Cambridge University Press.

Nattrass, N., 2007. *Mortal Combat: AIDS Denialism and the Struggle for Antiretrovirals in South Africa*. Pietermaritzburg, South Africa: University of KwaZulu-Natal Press.

Nhassico, D., H. Muquingue, J. Cliff, A. Cumbana and J. Bradbury, 2008. 'Rising African Cassava Production, Diseases Due to High Cyanide Intake and Control Measures'. *Journal of the Science of Food and Agriculture*, 88 (12): 2043–9.

Packard, R.M., 1986. 'Agricultural Development, Migrant Labor and the Resurgence of Malaria in Swaziland'. *Social Science and Medicine*, 22 (8): 861–7.

Packard, R.M., 1989a. 'Industrial Production, Health and Disease in Sub-Saharan Africa'. *Social Science and Medicine*, 28 (5): 475–96.

Packard, R.M., 1989b. *White Plague, Black Labor. Tuberculosis and the Political Economy of Health and Disease in South Africa*. Berkeley, CA: University of California Press.

Packard, R.M., 1993. 'The Invention of the "Tropical Worker": Medical Research and the Quest for Central African Labor on the South African Gold Mines, 1903–36'. *The Journal of African History*, 34 (2): 271–92.

Packard, R.M., and D. Coetzee, 1995. 'White Plague, Black Labour Revisited: TB and the Mining Industry'. In *Crossing Boundaries: Mine Migrancy in a Democratic South Africa*, eds J. Crush and W. James, 101–15. Cape Town: Institute for Democracy in South Africa/Ottawa: International Development Research Centre.

Peters, P.E., 2006. 'Rural Income and Poverty in a Time of Radical Change in Malawi'. *The Journal of Development Studies*, 42 (2): 322–45.

Pierson, P. 2003. 'Big, Slow-Moving, and . . . Invisible: Macro-Social Processes in the Study of Comparative Politics'. In *Comparative Historical Analysis in the Social Sciences*, eds J. Mahoney and D. Rueschemeyer, 177–207. Cambridge, UK: Cambridge University Press.

Prins, G., 1989. 'But What was the Disease? The Present State of Health and Healing in African Studies'. *Past and Present*, 124: 159–79.

RSA (Republic of South Africa), 2010. *Health KwaZulu-Natal. Strategic Plan 2010–2014*. KwaZulu-Natal Department of Health, www.kznhealth.gov.za/stratplan2010-14.pdf (accessed 7 December 2011).

RSA (Republic of South Africa), 2011. 'National Health Insurance in South Africa'. *Policy Paper*. Department of Health, http://www.polity.org.za/article/national-health-insurance-in-south-africa-policy-paper-august-2011 (accessed 30 April 2012).

Robins, S. and B. Von Lieres, 2004. 'AIDS Activism and Globalisation from Below: Occupying New Spaces of Citizenship in Post-Apartheid South Africa'. *IDS Bulletin*, 35 (2): 84–90.

Rose, G., 2001. 'Sick Individuals and Sick Populations'. *International Journal of Epidemiology*, 30 (3): 427–32.

SANAC (South African National AIDS Council), 2007. *HIV and AIDS and STI Strategic Plan for South Africa 2007–2011*. Pretoria, http://www.info.gov.za/otherdocs/2007/aidsplan2007/khomanani_HIV_plan.pdf (accessed 19 March 2012).

Scoones, I., N. Marongwe, B. Mavedzenge, J. Mahenehene, F. Murimbarimba and C. Sukume, 2010. *Zimbabwe's Land Reform: Myths and Realities*. London: James Currey.

Sen, A., 1981. *Poverty and Famines: An Essay on Entitlements and Deprivation*. Oxford: The Clarendon Press.

Silver, L., 2008. 'Canada Fit for War: Image and Development of the Canadian Soldier, 1870–1914'. *London Journal of Canadian Studies*, 23 (2007/2008): 1–29.

Steinberg, J., 2008. *Three-Letter Plague, A Young Man's Journey through a Great Epidemic*. Johannesburg: Jonathan Ball.

Stillwaggon, E., 2002. 'HIV/AIDS in Africa: Fertile Terrain'. *Journal of Development Studies*, 38 (6): 1–22.

Swanson, M.W., 1977. 'The Sanitation Syndrome: Bubonic Plague and Urban Native Policy in the Cape Colony, 1900–1909'. *Journal of African History*, 18 (3): 387–410.

Veitch, S., 2007. *Law and Irresponsibility: On the Legitimation of Suffering*. Abingdon: Routledge-Cavendish.