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Jock McColloch, 2012, *South Africa's Gold Mines and the Politics of Silicosis*, Johannesburg, Jacana Press, Southern African Edition, 178pp.

The slimness of this book belies its significance in laying bare the many facets of the largely invisible, but long-lived silicosis epidemic on the gold mines of South Africa. Its starting point is that current data on silicosis disease rates cannot be reconciled with what is officially on record, hence the need to revisit the history of this industrial disease and to establish why this is so.

Silicosis is one the oldest known occupational diseases and is life threatening as breathing in fine silica causes scarring of the lungs and, ultimately, death. The gold in South African mines is found in small concentrations in hard siliceous rock which is ground into fine dust and released into the air during all major stages of mining activity - drilling, blasting, cleaning and transport.

The book details the history and politics of silicosis, thereby allowing McColloch to provide fresh insights into the workings of the apartheid state, the relationship between the state and gold mining companies in South Africa, and the way colossal injustice and suffering went unrecognised while in plain sight. The book also deals with the connection between silicosis and tuberculosis. Gold mining, through the migrant labour system, spread tuberculosis into rural communities across southern Africa and McColloch indicates that on its own it can be fatal but it also increases the chance of contracting tuberculosis. The book concludes on the prospect that class action lawsuits against mining companies could at last bring relief to gold miners and rural mining communities.

The account is bracketed by two crises, one early in the history of gold mining when silicosis first emerges as a serious problem, and the second, which is unfolding at present, in which mining companies have to account for their neglect and inaction.

The first crisis was sparked off by the deaths from silicosis of hundreds of Cornish miners which caused outrage in Britain and led to a series of investigations beginning with a delegation from

the British parliament in 1902. These investigations culminated in measures to reduce dust levels which transformed silicosis from an acute to a largely chronic disease. Concerns about the high incidence of pneumonia among black workers also surfaced during the investigations but were ignored. By 1911, black workers were more at risk than their white counterparts, as they were confined to the manual work of mining while their white counterparts moved into supervisory roles.

The second and current crisis has been triggered by the availability of data which more fully describes the scale of the epidemic among black miners. This data forms the basis for class action lawsuits which could lead to a reckoning of the full costs of the silicosis epidemic and recompense.

The book opens with a short description of the apartheid state and the centrality of mining to the industrialisation of South Africa. It echoes the general agreement that the country's economy is founded on tightly controlled cheap labour, and that this came at a high price to black South Africans. The migrant labour system with its infamous mine hostels, was linked to policies forcing people into crowded reserves, leaving them to fend for themselves under the guise of "separate development". While the national economy grew, black South Africans became more impoverished. The silicosis epidemic is not however confined to South Africa. Until the 1950s, the migrant labour system extended far into the Zambezi valley, Mozambique and Central Africa, and communities there too succumbed to tuberculosis and were required to care for large numbers of sick miners.

Overall McCulloch's narrative unfolds chronologically, but the first six chapters cover the same period ranging from the late 19<sup>th</sup> century in which the industrial revolution started in South Africa, to the mid-1930s. Each of these chapters delves into a different issue such as who presided over the research and documentation of silicosis; who designed the legislation, and the systems of medical surveillance and compensation; and who shaped the migrant labour system. In each case, McCulloch describes how the mining houses exercised considerable influence and ensured that debates and differences were resolved in their favour.

The point is made that knowledge of silicosis and the means to prevent it were available before mining began in South Africa. However, given the nature of gold mining, it was difficult to apply

that knowledge and mining continued. In examining the relationship between the Chamber of Mines, which represented the mining companies, and the research community, McCulloch shows how the mining industry was able to present a sanitised and respectable face to the global community, including the ILO. Any evidence or developments which challenged the status quo were quashed, and the notions that silicosis was contained and that tuberculosis was unconnected to the mines, persisted in official circles for decades.

The mechanics of the medical surveillance and compensation systems illustrate how coincidence plays out between the industry's interests in securing cheap labour and the state's ambitions for industrialisation. Mine doctors, licenced by the state, conducted medical examinations. They determined who was "fit to work" and who was eligible for compensation. There were many shortcomings in the medical surveillance system. For example, there were questions about the value of undertaking medical examinations *en masse*, concerns over difficulties in diagnosing tuberculosis, differences in the competency of mine medical officers, and evidence of large scale repatriation of black workers without compensation. Yet the system prevailed because of its singular role in controlling the costs of mining and movement of black labour.

Concern over the containment of costs never recedes. In the mid-1950s when the industry faced increased pay-outs to white miners for pulmonary disability, the state and representatives of medical research fraternity again weighed in on the side of the industry. Drugs became available to treat tuberculosis but the system failed because miners were unable to complete the two year regimen. They were initially treated at the mines, repatriated and then expected to continue treatment as outpatients in the rural hinterland. Many consequently developed a drug resistant form of the disease. Eventually a regime was adopted where miners continued to work while being treated for tuberculosis. In the mid-1990s, as South Africa became a constitutional democracy, a commission of inquiry into mine safety and health reopened the window on the epidemics of tuberculosis and silicosis, and set the stage for the pending class action suits.

Jock McCulloch has produced a compelling, well researched account of the silicosis epidemic's extraordinary scale and consequences. It could however have been more nuanced. For example the account does not acknowledge that the apartheid state

and colonial regimes that preceded it, routinely and systematically made selective use of information. Under apartheid, widespread malnutrition, failures to provide clean water, sanitation services and education were all obscured by incomplete and fragmented datasets put together by researchers closely aligned to the state. Another issue is that occupational health rarely receives the attention it deserves. Across the world, occupational diseases go unrecognised and underreported. The reasons for this warrant deeper interrogation and explanations beyond the conspiracies that were also in play.

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