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Abstract

Research about HIV constitutes a global domain of academic knowledge. This domain is dominated by biomedicine, and by institutions and funders based in the 'global North'. However, from the earliest years of the epidemic, African investigators have produced and disseminated knowledge about HIV. Using a 'Northern' standard for determining research impact - bibliometrical measures of citation count - we demonstrate how metrics for capturing the impact of knowledge may be repurposed. We explore how the research in this archive may be interpreted as 'Southern Theory'. Our argument is not based on the geographical location, but instead on epistemological significance. With a focus on South Africa, we situate HIV social science within changing historical contexts, connecting research findings to developments in medicine, health sciences and politics. We focus on two key themes in the evolution of HIV knowledge: (1) The significance of context and locality - the 'setting' of HIV research; and (2) sex, race and risk – changing ideas about the social determinants of HIV transmission.

Introduction

At the end of 2007, South Africa, a newly democratic nation, had the world's largest population of people living with HIV (Abdool Karim & Baxter, 2005: 37). The scale of the epidemic, and the political and health contestations that it generated, provided fertile grounds for research. HIV/AIDS became a heterogenous domain of knowledge produced by journalists, state authorities, civil society, the medical profession and academia. Powerful new alliances were built between political authorities, NGOs, activists and researchers (Grebe, 2012: 97).[1] South Africa's HIV/AIDS domain may be characterised in various ways, including through key contestations that arose, and around which debates raged.

[1] Eduard Grebe has mapped networks among civil society, bilateral partners, state institutions, South African scientists and HIV activist organisations in the co-production and dissemination of knowledge within the global AIDS domain during the early 2000s, at the height of South Africa's era of AIDS denialism.

During the 1990s, President Thabo Mbeki's 'AIDS denialism' was one such contestation (Nattrass, 2007). But the debate over the science of HIV transmission and its treatment, at the crux of AIDS denialism, was not the only contestation in this knowledge domain. As HIV/AIDS research attracted more attention globally, South African scientists were at the forefront of creating and disseminating knowledge about the epidemic. While initially dominated by clinical and laboratory scientists, research on HIV rapidly attracted the attention of scholars from other disciplines. As research began to accumulate, driven by the desire to understand and treat the pandemic, the global HIV/AIDS domain was forged.[2] The domain was characterized by the centrality of a common set of questions that drove the research – what is HIV? How does it spread, and how can it be managed and treated? These questions were interpreted in different ways depending on discipline, expertise and location, as the globe was divided into different regions of epidemic prevalence. Yet a broad swathe of research came into existence that was united by a common concern and which the keywords 'HIV/AIDS' could identify.

The number of HIV/AIDS research collaborations grew, often featuring a well-funded Northern team and an *in situ* South African team. Cross-regional collaborations flourished, as did research outputs (Onyancha, 2008; Yach & Kenya, 1992; Uthman, 2008). Yet the control of the research, reflected in volume of publishing and primary authorship, as well as funding, remained highly contested. This was part of a globally acknowledged problem where HIV/AIDS research was skewed to the North. For example, Luc Montagnier, who is credited with discovering AIDS, stated in his acceptance speech for a Nobel Prize (2008):

> 'Too many examples showed that collaboration between northern and southern research laboratories is unequal, the south providing serum samples to be analysed in the North'.

Montagnier's frank admission echoes the concerns of Raewyn Connell in *Southern Theory* (2007). Knowledge-making practices consolidate and perpetuate global inequalities. Here we argue that the HIV/AIDS knowledge domain is global. We also argue that 'Southern scholars' – despite geographical, material and structural constraints – have intervened in, and reconfigured, the domain. Using conventionally northern metrics of impact, we show that HIV social scientists have worked within Northern epistemologies to re-orient these towards the epidemiological, social and structural specificities of the global South.

[2] Following Spradley (1979) we understand a knowledge domain as describing the arc of knowledge that is being studied.

Scholarly analysis of the AIDS domain has focused on its clinical dimensions (Poreau, 2015). Eric Mykhalovskiy & Marsha Rosengarten (2009) have argued that the focus on 'evidence-based research' has eclipsed theoretical, critically engaged scholarship. As medical framings of HIV have gained prominence, the social dimension of treatment-taking, HIV testing, circumcision and condom use have been elided. In South Africa, where debates about HIV/AIDS assumed national significance during the presidential tenure of Thabo Mbeki, the division between social scientists and Humanities scholars, and clinicians and public health researchers, is especially stark. But it is not the only source of division in this domain of knowledge.

During the late 1990s, in what Lesley Green has termed the "science wars", high-ranking public officials in South Africa (including President Thabo Mbeki) disputed the viral aetiology of AIDS, and supported AIDS denialism. Arrayed against him was the rump of the South African academy, scientists and social scientists alike. They were often aligned to activist groups who were fighting to secure public access to ART. Another battle was being waged around the issue of preventing infections. And here the social scientists were at the fore, contesting views about 'African' sexuality on the one hand, and crude biomedical views about the relationship between sexual risk taking and infection on the other.

In this paper we explore how South African social scientists developed a distinctive body of work. We show how this work both reflected their location with a national context which was highly politicized in terms of knowledge production and how they consciously sought to make their work relevant to the national demands for a more effective response by government and NGOs to HIV/AIDS infection and treatment. Their work was also sensitive to a global research climate dominated by Northern scientists and funders. By examining the 10 most cited articles by SA social scientists we argue that AIDS research by South African social scientists reflects the constant struggle of knowledge production, where historically Southern voices have been less important than those in the North. In the AIDS domain, South African social scientists have claimed ownership of the research agenda, challenging core conceptualisations of HIV epidemiology.

The impact of medical research about HIV in South Africa is well-established. Key scientific advancements, including the development of ART, resulted from trials conducted with Asian, Latin American and African investigators and participants. The lead investigators of trials such as CAPRISA, or HPTN052, have determined the course of the global response to the epidemic, including

through the development of HIV treatment (WHO, 2013).[3] The application of these findings, including in World Health Organisation guidelines, UNAIDS targets and numerous national AIDS strategies, reveals their influence. These collaborations have, at times, replicated asymmetries in knowledge production. However, they have also ensured that the perspectives of Southern researchers have defined key tenets and debates within the AIDS knowledge domain. Their findings have challenged core assumptions within the life, health and social sciences.

Here, we explore how HIV research in the social sciences has made its own impact on the global AIDS knowledge domain. With a focus on South Africa, we situate HIV social science within changing historical contexts, connecting research findings to developments in medicine, health sciences and politics. We focus on two key themes in the HIV social sciences: (1) The significance of context and locality - the 'setting' of HIV research; and (2) sex, race and risk – changing ideas about the social determinants of HIV transmission. We generated an archive of high impact HIV social science research. While the most widely cited articles in South African HIV social science formed the core of this archive, other research studies were accreted once the key themes from our bibliographic base had emerged. Based on this analysis, we argue that social scientists have used a range of academic tools – research studies, institutional collaborations and peer-reviewed publications – to redirect and reconfigure the global AIDS knowledge domain.

Jean and John Comaroff have written that the 'global South' is seen as "primarily a place of parochial wisdom, of antiquarian traditions, of exotic ways

[3] In the most recent WHO ART guidelines, references to South African studies include: Abdool Karim, S.S. *et al.* (2011) Integration of antiretroviral therapy with tuberculosis treatment. *New England Journal of Medicine*. 365: 1492-1501; Coovadia, H.M. *et al.* (2012) Efficacy and safety of an extended nevirapine regimen in infant children of breastfeeding mothers with HIV-1 infection for prevention of postnatal HIV-1 transmission (HPTN 046): a randomized, double-blind, placebo-controlled trial. *Lancet*, 379(9812): 221-228; Coutsoudis, A. *et al.* (2004) Late postnatal transmission of HIV-1 in breast-fed children: an individual patient data meta-analysis. *Journal of Infectious Diseases*, 189(12): 2154–2166; Davies, M.A. *et al.* (2011) Accuracy of immunological criteria for identifying virological failure in children on antiretroviral therapy – the IeDEA Southern Africa Collaboration. *Tropical Medicine and International Health*, 16(11): 1367-1371; Davies, M.A. *et al.* (2012) The role of targeted viral load testing in diagnosing virological failure in children on antiretroviral therapy with immunological failure. *Tropical Medicine and International Health*, 17(11): 1386-1390; Orrell, C. *et al.* Resistance in pediatric patients experiencing virologic failure with first- and second-line antiretroviral therapy. *Pediatric Infectious Diseases Journal*, 32(6): 644-647; van Zyl, G.U. *et al.* (2009) Protease inhibitor resistance in South African children with virologic failure. *Pediatric Infectious Diseases Journal*, 28(12): 1125-1127.

and means. Above all, of unprocessed data" (2012: 1).[4] HIV research has advanced through academic institutes and funding bodies based largely in the global North (Comaroff & Comaroff, 2012). However, African investigators and research sites have played a crucial part in HIV research from the beginning of the epidemic. Their roles in the design, implementation, analysis and publication of high-impact research challenges an epistemological binary of 'Northern dominance' and 'Southern subservience'. Our analysis breaks down this representation, arguing that 'Southern scholars' have used their research to reshape the AIDS knowledge domain. They have done so through foregrounding the power of Southern locality in research, and through contesting the universal application of certain biomedical orthodoxies. Their work forms part of a critical canon of scholarship about the AIDS epidemic, and constitutes what may be thought of as 'Southern Theory'.

Raewyn Connell's *Southern Theory* and Jean and John Comaroffs' *Theory From The South* are our two primary theoretical referents. While the two texts advance different interpretations of 'Southern theory' (in Connell's terms), and 'theory from the South' (in the Comaroffs), there are notable similarities. Both emphasise the enduring impact of European colonialism on the global knowledge economy, in which metropolitan institutions in the global North control a vastly disproportionate share of the world's intellectual capital (Connell, 2012: 1677; Comaroff & Comaroff, 2012: 26, 42-5, 175-78). Both highlight how knowledge-making processes in the South are either not recognised in conventional publishing metrics or have a much lower impact. In this paper, we argue that the global AIDS domain replicates power asymmetries in the global production of knowledge. However, using conventionally northern metrics of measurement – impact factor – we show how HIV social scientists have worked within northern institutions and networks to expand their intellectual concerns. With a focus on how social scientists have challenged and adapted foundational claims about HIV epidemic, we argue that these scholars have re-oriented global knowledge production about HIV towards the south, and as such may be classified as 'Southern theorists'.

But what constitutes and defines a 'Southern theorist'? Does the term denote geographical region, with all those 'theorising' in the 'global South' forming part of this intellectual enterprise? How is the 'South' defined, and does it exclude pockets of peripheral or marginalised populations living within affluent societies within Europe and the US? Moreover, what constitutes 'theory' as a form of critical, generalised knowledge? These are all central questions within the emergent literature on Southern theory. In this paper, we argue that Southern

[4] For a snapshot of global inequalities in the production and ownership of scientific knowledge, see Florida, R. (2015) The world is spiky. *The Atlantic Monthly*, 296(3): 50-51.

theory is defined not principally by the location of writers, but rather through their critical engagement with how knowledge is produced along global axes of affluence, prestige and power (Dados & Connell, 2012).

Both Connell and the Comaroffs argue against the interpretation of 'South' in a literal geographical way. The global economy "doesn't produce a simple dichotomy", between regions of the globe, but rather, as Connell argues, "massive structures of centrality and marginality" (2014a: 526). For the Comaroffs, the 'South' is more process than place, more *relation* than location. Connell and the Comaroffs texts are further united by a sense of the restorative and emancipatory power of 'Southern theory': an intellectual project which aims to provide, in Connell's terms, a new conceptual language (2012: 1679), and, for the Comaroffs, a 'different register' for social scientists (2012: 48). 'Southern theory' has provided scholars from different disciplines with a means of articulate global asymmetries in knowledge production (Carrington *et al.*, 2015: 15; Morrell, 2016). In this chapter, we use 'Southern theory' as an analytic frame to analyse, and interrogate, the geopolitics of knowledge about the global AIDS epidemic. We use 'Southern theory' as means of understanding, in particular, how the contributions of social scientists have challenged foundational claims about the HIV epidemic.

While the intellectual conceptions of the South by Connell and the Comaroffs have some synergies, there is also dissonance. The Comaroffs perceive influences of the Enlightenment thinking in 'theory from the South', consonant with Dipesh Chakrabarty's conceptualisation of political modernity (2007: 4-9). Connell, on the other hand, reads this intellectual genealogy as potentially reifying Northern epistemological dominance (2014a: 524). In this paper, we demonstrate that Southern scholars have been influenced by Northern theorists, evident in their theoretical frameworks, study design, and citations lists. However, we also argue that their research challenges epistemological hierarchies within the global production and dissemination of knowledge about HIV. We argue that the global AIDS knowledge domain is better understood as a matrix of ideas, rather than a unidirectional flow, from 'North' to 'South. This archive suggests a greater porosity and reciprocity in global knowledge production within the global AIDS domain, foregrounding relationality above unidirectionality: a central concern of 'Southern theory' (Dados & Connell, 2012).

Social science articles generally report on the design and findings of research studies, and as such are classified as secondary sources. Our study inverts this hierarchy of source classification. We approach research articles as primary sources, created during the period of study, that reveal the substance and evolution of social understandings about HIV. We explore how the objectives,

design, methods and findings of these studies advance key tenets of 'Southern theory', as a new means of understanding the content of research, but also its design, production and dissemination.

As the critical literature on impact factors and peer-reviewed publication has shown, metrics for evaluating the influence of academic research are flawed (van Raan, 2004; Hicks, 2004). While the parameters of our literature search remained proscriptive, this was necessary to define a dataset of articles for further analysis. We used Google Scholar to identify key studies in the HIV social sciences (Serenko & Dumay, 2015; Roger, 2009). Google Scholar orders search responses by relevance, scoring publications according to a 5-year h-index. It searches selective, academic and science-oriented databases, but also includes a wider variety of articles, theses, books, abstracts, professional societies, universities and repositories than might be generated through the search responses of other citations platforms. Using Google Scholar as a portal broadened the archive to include social science publications within the AIDS knowledge domain. We entered the phrase 'HIV social sciences South Africa' into Google Scholar. We then selected the top ten articles as they appeared in this search. These are generally but not always the most cited articles in the field (Beel & Gipp, 2009). This produced the primary dataset for this study. Publications were then analysed thematically, with particular attention to research setting, methods, collaborations and findings (See Appendix 1). Using a conventionally Northern metric of impact – Google Scholar – in a study on 'Southern Theory' may seem paradoxical. But, it is precisely through analysing how southern scholars have adapted certain scholarly conventions to challenge and unsettle academic orthodoxies, that the scope of their critical intellectual value is revealed.

The centrality of context

Connell (2007) argues that the lack of attention to context and place, "the silence of the land", are specific features of modern social theory. By contrast, a core component of the HIV social sciences in South Africa has been to emphasise, and interrogate, locality – to explore the power and meaning of context. One of the ways in which scientific research establishes validity is through claiming universality. The role of context, in peer-reviewed scientific articles, is often reduced to a single sentence under 'study setting'. The body of research in this archive, however, paid close attention to context. While adhering to a positivist epistemology, studies presented robust, triangulated findings, situated resolutely within the methodological bounds of scientific rigour. They also located their findings within the global South, and specifically within South Africa. They grappled with the realities of HIV in the global South,

at the epicentre of the AIDS epidemic, while using the validity conferred by science to circumvent allegations of narrowness and particularism. Numerous authors used a grounded theory as an analytical tool, foregrounding the power and significance of context while avowing the empirical power of longitudinal research. Grounded theory was used to strike an elusive balance between "the epic and the everyday, the meaningful and the material" (Comaroff & Comaroff, 2012: 48).

Authors in this archive were reluctant to make sweeping conclusions. They foregrounded the contingent, complex and elusive nature of their findings, highlighting the limits and shortcomings of their research. Campbell, for instance, wrote: "[T]he ambiguity, complexity and even contradictory nature of our findings suggest that the interface between sexual health and social capital is an area that defies easy generalization, and one where researchers need to proceed with caution" (Cambell *et al*., 2002: 51). In contrast to the bounded and decisive nature of conclusions within academic research, the closing paragraphs of research studies in this archive called for further research and more in-depth analysis – in particular qualitative work – to validate findings. For instance, Lurie *et al*. wrote (2003: 155):

> 'Further research and perhaps the development of additional methods for the study of female sexual behaviour in rural areas are urgently needed to shed more light on social arrangements that underlie the complex epidemiologic patterns identified in this study'.

While acknowledging the necessity of empirical conclusions, these studies simultaneously conveyed an awareness of the limitations of science.

In her article on 'Migrancy, masculine identities and AIDS', Catherine Campbell (1997) explores the "psychosocial context of HIV transmission on the African goldmines". She examines HIV transmission in relation to the living and working conditions of miners. The research setting, with its specific social and economic formations, is the quintessential South African habitus. The migrant labour system was both a fundamental component of the apartheid labour economy, and a key epidemiological factor in the HIV epidemic. In her account of HIV transmission on the mines, Campbell combines an analytical focus on the epidemiological and psychosocial effects of the migrant labour system. In doing so, she bridges the disciplinary divide between political economy, epidemiology and cultural studies, re-imaging the significance of one of the most productive subjects of academic enquiry in South Africa: the mines.[5]

[5] Scholarship about South Africa's migrant labour system is copious, spanning the disciplines of economics, history, sociology, law and public health. Canonical texts include Wolpe, H. (1972) Capitalism and cheap labour-power in South Africa: from segregation to apartheid.

Moreover, through her inclusion of "interpretive repertoires", informants' accounts of their experiences of health, illness, HIV and sexuality, Campbell emphasises the experiences of individuals, discerning subjectivity within a typically amorphous mass of HIV statistics.

Campbell considers how the setting of the mine mediates the behaviours and experiences of miners. She grapples with the situation-dependent and context-specific nature of miners' social identities, and how they are negotiated, produced, and constructed in a dynamic interaction between individual and locality (1997: 274). She relates the social context of the mines, characterised by danger, poverty and alienation, to particular sexual behaviours and practices among mine workers. Her analysis emphasises the tension between individual agency and context – structural conditions, socio-cultural norms, and individual behaviours – a central analytical tension within the HIV social sciences.

Similarly, Mark Lurie *et al.*'s study of 'The Impact of Migration on HIV-1 Transmission in South Africa' positions the migrant labour system as both a core feature of the apartheid labour economy and of South Africa's epidemiological landscape. Lurie *et al.* investigate the associations between migration and HIV infection, examining how the economic and epidemiological effects of migrancy relate to risk factors for HIV-1 infection (2003: 49).

Another way in which authors avowed the importance of locality was in emphasising the critical role of the past in the present and questioning how the legacy of apartheid was associated with national HIV prevalence. While public health research is often characterised by an immediacy, a focus on present-centered phenomena, this archive persistently highlighted the power and influence of the past in shaping South Africa's epidemiological present (Gilbert & Walker, 2002). Authors focused on gender, race and geographic location as categories of social inequality. In enumerating the factors that have influenced both the patterns and the severity of South Africa's HIV epidemic, Gilbert & Walker include "migrant labour patterns and high levels of poverty in the region", which they relate to apartheid social engineering.

Economy and Society, 1(4): 425-56; Johnstone, F. A. (1976) *Class, Race, and Gold: A Study of Class Relations and Racial Discrimination in South Africa*. London: Routledge and Kegan Paul; Marks, S. & R. Rathbone (eds.) (1982) *Industrialisation and Social Change in South Africa: African Class Formation, Culture and Consciousness, 1870-1930.* London: Longman; Bonner, P. *et al.* (eds.) (1993) *Apartheid's Genesis, 1935-1962*. Johannesburg: Ravan Press and Witwatersand University Press; Moodie, T. D. & V. Ndatshe (1994) *Going for Gold: Men, Mines and Migration*. Berkeley: University of California Press. Jock McCulloch's study of the collaboration between medical authorities, state officials and businesses in asbestos mining in South Africa is canonical in the medical history of the mines. See, McCulloch, J. (2002) *Asbestos Blues: Labour, Capital, Physicians and the State in South Africa*. Oxford: Oxford University Press.

Causal pathways and associations between poverty, inequality and HIV transmission are not uncontroversial. A substantial literature challenges claims that AIDS is fundamentally a disease of poverty, and that the best means of preventing HIV transmission are poverty reduction and economic development (Nattrass & Gonsalves, 2009; Gillespie *et al*., 2007; Mishra *et al*., 2007). Researchers have shown that HIV transmission is not necessarily more common among poorer populations. South Africa is a middle-income state characterised by vast inequalities in income. The HIV epidemic is related to these inequalities, but in ways which resist simplistic interpretation or intervention. Numerous authors have critiqued 'magic bullet' approaches to HIV programming, arguing that HIV interventions will not succeed unless combined with clinical and social care, recognising that epidemiological outcomes are also socially determined. As Gilbert & Walker (2002: 1094) state:

> 'An examination of recent South African patterns of infection and death from AIDS related illness, strikingly reflects broader social cleavages and inequalities. Sociological literature and health education programmes which primarily argue that individual behaviour needs to be challenged and altered before transmission rates will decline are naïve, misplaced and misleading'.

Authors in this archive advanced different understandings of the role of history in South Africa's HIV epidemic. They all, however, recognised the importance of social context, the specificity of locale, and the power of the past to inflect and impact the future. They often opened with a global overview of the epidemic, using statistics as 'establishing shots', such as the total number of people living with HIV worldwide. Next, they zoomed in on Africa as the worst affected region, "home to 60% of those living with HIV/AIDS and 75% of the global population of HIV-positive women", with South Africa as its epicentre (Cooper *et al*., 2007: 274-5). Maintaining the global, regional and local significance of the HIV presented a challenge: researchers walked a rhetorical tightrope between generalisation and particularity, normalisation and catastrophe.

AIDS prevalence platitudes, and a concomitant focus on the catastrophic consequences portended by AIDS in Africa, have inspired an intellectual backlash.[6] These calls grew louder after the 2008 financial crisis, as new

[6] Among the best known popular response to AIDS prevalence platitudes is a document circulated among key ANC officials, and which is linked by scholars to AIDS denialism within the ANC: 'Castro Hlongwane, Caravans, Cats, Geese, Foot and Mouth and Statistics: HIV/AIDS and the Struggle for the Humanisation of the African'. Document distributed at an ANC National Executive meeting on 15 March 2002. Mbeki has subsequently claimed authorship. See Mbeki, T. (2016) A Brief Commentary on the Question of HIV and AIDS. 7

inducements for fiscal austerity in public expenditure gained momentum. A growing corpus of research claims that the social and medical challenges of HIV have been exaggerated by lobbyists with a stake in the bloated 'AIDS industry'. Writers have argued that HIV has not precipitated the crisis that some predicted, critiquing claims that HIV poses a threat not just to public health, but to economic development and global security.[7] As conceptualisations of 'risk' evolved, debates about alleged associations between HIV risk, sexual behaviours, ethnicity and locality formed a new hub of contestations within the global AIDS knowledge domain.

Sex, race and risk

The tropes of HIV 'risk' and 'contamination' have evolved in relation to changing medical and social meaning of the epidemic. In her argument that AIDS has been reconstrued as an 'African disease', Susan Sontag describes how beliefs about metropolitan distinction are premised on an idea that calamities which occur in Manhattan, London and Paris are transformative and history-making, while in Africa they are a part of the 'natural' cycle of disease and death (1989: 113, 131).[8] The global media has played a crucial role in projecting a hyper-real image of the epidemic, transforming AIDS into a media sensation that arguably precludes identification rather spurring action (Rosenberg & Golden, 1992). The exposure of Northern nations to images of AIDS in the global South may have accelerated and calcified notions of otherness, fostering inertia in the face of boundless knowledge of human suffering (Agamben, 1998; Biehl, 2001).

Attempts to reach and to affect global audiences required the careful presentation of local findings as nationally, regionally and globally relevant. In their study of transactional sex among women in Soweto, for instance, Kristin

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March, http://www.thabombekifoundation.org.za/Pages/A-BRIEF-COMMENTARY-ON-THE-QUESTION-OF-HIV-AND-AIDS.aspx, accessed 30 March 2016.

[7] The World Bank (1999) *Intensifying Action against HIV/AIDS in Africa: Responding to a Development Crisis*. Washington: World Bank, describes HIV as threat to development in Africa, because AIDS mortality "decimates the workforce" (p. 5). Rhetorical similarities with climate change, and with Ebola. Proponents of interventionist responses framing these problems as critical, global threats, and opponents as decrying their tendentious exaggeration to procure funding or promote particular social agendas. The etymology of the terms, 'AIDS industry' itself reveal much about discursive and intellectual shifts in the framing of the HIV epidemic – from an urgent mission to save humanity, to the purview of mercenary lobbyists, researchers, development consultations and governments.

[8] This process is not unique to HIV/AIDS. Responses to the Ebola outbreak in Western Africa provide a rich case study regarding the expendability of African lives, so long as vectors of infection are contained.

Dunkle *et al.* discerned global processes of gendered socio-economic subordination. Wary of reifying as the cause of the AIDS epidemic the cultural idea that Africans have sex differently, they emphasised the universality of their findings. While acknowledging that transactional sex with non-primary partners was a common practice among South African women, associated with increased HIV prevalence, Dunkle *et al.* qualified their findings: "There is no reason to expect that transactional sex is a phenomenon unique to sub-Saharan Africa. The interplay of gender-based violence and gender-based disparities in economic power is a global phenomenon" (2004: 1590). Dunkle and her main collaborator, Rachel Jewkes of the Medical Research Council, raised large research grants, developed a research programme and published a suite of articles in high impact-factor journals that led the way in showing how gender inequality and violence fuelled the pandemic. Their research material was collected in South Africa, became part of important national debates about gender-based violence and pioneered new methods and insights into HIV research globally (Jewkes *et al.*, 2013).

A central question posed by HIV social science is how to position marginality in relation to agency in HIV infection and transmission, how to account for the determinism of structural legacies, while acknowledging social agency and dynamism? Understanding position, power and precariousness, social agency and structure, are among the chief objectives of South Africa's HIV domain. Simple biomedical proscriptions, such as the 'test and treat' approach, have been critiqued by this literature, which has come to conceptualise risk and resilience in more complex ways – as expressions of vulnerability and agency, and of the interplay between them.

A critical contribution of this literature has been its challenge to the 'KAP' model – 'knowledge, attitudes, behaviour'. This model was at the core of most early HIV intervention programmes and presumed that greater knowledge about a disease would automatically translate into preventative behaviours. Through avowing the mediations of social expectation, gender, desire and intimacy, the authors of this archive have sought to study the mechanics of risk behaviours (Campbell, 1997: 274). Through critiquing the KAP approach to HIV interventions, social scientists have challenged a medical model of health behaviours, which emphasises individual mastery as the core constituent of health. As Campbell explains:

> 'Critics of the KAP approach have warned of the limitations of reducing sexuality to a series of isolated and quantifiable items of behaviour (e.g. whether people use condoms or not; how many sexual encounters a person has per month). They argue that sexuality consists not of isolated and quantifiable items of behaviour, but of a complex

> of actions, emotions and relationships, "whereby living bodies are incorporated into social relations", and which are too complex to be apprehended using quantitative research alone' (Kippax *et al*., 1993: 257).

In the most widely cited article on HIV social sciences in South Africa, Campbell makes an argument for the power of embodiment, for a more nuanced, psychodynamic understanding of human sexuality. Her analysis draws attention to biopolitics – the relationship between medicine, morality and governance – and to the necessity of integrating qualitative and quantitative strategies to improve the quality and validity of findings. Gilbert & Walker (2002), other authors in the archive, also highlight the constraints of quantitative research, challenging the empiricism and representivity of 'problematic statistical data'. The social science critique of behavioural metrics, particularly of sex and substance abuse, have inspired a critical literature of their own. At best, these behaviours are difficult to measure, amenable to desirability bias. At worst, their quantification is an exercise in irrelevant bean-counting, prurient projection, and what Deborah Posel (2000) has termed the "mania for measurement".

Sexual behaviour emerged as a legitimate subject of scientific enquiry from the late nineteenth century. The HIV knowledge domain drew upon this earlier tradition, rationalising and populating the ever-expanding research corpus on scientific accounts of sex. But the domain has also expanded through the theoretical interventions of feminism and queer theory.

Feminism was the mainspring of much of the work on gender and sexuality that populates our archive. The focus on power inequalities between men and women and how these played out in the negotiation of sexual intimacy was central to this work. Authors drew from a vast body of feminist scholarship and practice in the global North, while adapting and interpreting this work to grip onto Southern African realities (Hassim & Walker, 1993; Lewis, 2001; Hassim, 2006; Morrell, 2016; Morrell & Clowes, 2016). The emergence of queer theory provided scholars and activists with an academic vocabulary for what was rarely named publicly in South Africa: the fluidity of sexuality and the co-existence of hetero- and homo-sexual practice, including among African populations. Denied and then denounced as un-African, homosexuality became the focus of research (Gevisser & Cameron, 1994; Epprecht, 1998; Reddy, 1998; Schneider, 2002). Homophobia became a central element of research work on stigma. This work in turn was part of a movement that saw sexual orientation included as a right in the Constitution in 1996, becoming an important element in the formulation of HIV and AIDS policy. In terms of political mobilization, the new visibility of homosexuality and its intellectual application in queer theory, made it possible

for TAC – founded by gay rights activists – to operate on the HIV and AIDS terrain (Hodes, 2014).[9]

In the global HIV/AIDS knowledge domain, sexual practices are well-established as valid forms of scientific inquiry, public scrutiny, and health intervention. The explicit naming and classification of sexual practices is so ubiquitous in HIV scholarship. A recently published study in the prestigious *Journal of Acquired Immune Deficiency Syndrom*e, for instance, provides a powerful example. Titled 'Order of Orifices: Sequence of Condom Use and Ejaculation by Orifice During Anal Intercourse Among Women: Implications for HIV Transmission' (Gorbach *et al*., 2014), the article demonstrates how sexual encounters may be typified as an 'ordering of orifices' that determines HIV risk. The point here is not to question the epidemiological significance of sexual sequencing, but rather to foreground the epistemic conditions which have allowed for these kinds of scientific investigations to flourish. Intimate sexual behaviours are a core 'unit of analysis' in the ever-proliferating scientific literature on HIV transmission. A counter weight is provided by our archive, which gives human value to sexual relations, places them in context, and embodies them. In this way the potential for scientific work to mechanise, de-individuate and thus devalue the relational quality of intimacy is contested.

In the HIV/AIDS knowledge domain, HIV transmission risk is the explicit unit of analysis, while claims about cultural and behavioural norms are more implicit. The knowledge domain has been built on the combination of these foundational claims – the attribution of a cultural basis to disease transmission. But it has also been fundamentally changed through social science which has questioned the scientific validity of cultural attributions within HIV epidemiology, and has instead focused on the importance of context and locality, agency and circumstance in the evolution, transmission and treatment of the HIV/AIDS epidemic.

Implications for Southern Theory

Kiran Pienaar describes how the evolution of HIV as a knowledge domain in South Africa is "consistent with global trends towards the pharmaceuticalization of public health… and an associated de-accenting of the social-behavioural dimensions of the disease" (2014: 14). Despite the failure of scientific medicine

[9] See, Hodes, R. *Broadcasting the Pandemic*, pp. 24-25 for an historical account of alliances between gay rights and HIV activism in South Africa during the 1990s, and pp. 73-79 for a discussion of the strategic and tactical influence of radical AIDS activists and gay rights activism in the global North on South Africa's HIV treatment access movement.

to provide the two solutions to HIV: prevention (vaccine) and cure, scientific medicine has asserted epistemological pre-eminence in the HIV response, gaining ascendency over socio-behavioural interventions as the best means of epidemic response (Mykhalovskiy & Rosengarten, 2009). Interventions with an avowedly social dimension – condom use, HIV testing, antiretroviral treatment – have been recast as medical.

South African social scientists have sought to disrupt the division between HIV as a medical and, separately, as a social phenomenon. They have positioned the socio-medico constituents of HIV as co-produced and co-constituted, dialectical rather than dichotomised. A core contention of this research archive was the hybridity of its methods, its combination of research strategies, theoretical frameworks and intellectual objectives. Researchers challenged traditional disciplinary divisions through incorporating elements of history, anthropology, the life sciences, bioethics, sociology, and other forms of academic enquiry. They also combined qualitative and quantitative research strategies to triangulate their findings, and included different modes of understanding and analysis in their research. Campbell *et al.*'s application of a theoretical concept rooted in metropolitan thinking, 'social capital', to community-level influences on health, is one example of this methodological hybridization. The contribution of the authors in this archive to the HIV/AIDS knowledge domain is at once theoretically ambitious and contextually grounded, 'blue skies' meets 'grassroots'. A preoccupation with community level factors, the social experiences and realities of what the Comaroffs have called the 'majority world', is a common feature. Again, the associations, intersections and cross-overs, the relations, between social experiences, the lived realities of the majority world, and their influence on HIV epidemiology, are central concerns of this archive (Campbell *et al.*, 2002: 42).

Another feature is their novel theorisation of health and agency, for instance in relation to peer education (Campbell & MacPhail, 2002). Authors in this archive have been embedded in a research context in which the stakes are extremely high: producing knowledge about HIV responses to inform the most effective responses. As the HIV response in South Africa has evolved over the course of three decades, programmatic interventions have at times outstripped evidence. Health interventions which have seemed intuitively progressive and protective have been 'rolled out'. One of the aims of this archive, then, has been to respond to the programmatic needs for empirical research on the efficacy of particular health interventions – to unbundle causal pathways in HIV risk and resilience. Campbell & MacPhail conducted critical research on peer education, a widespread staple of HIV interventions in South Africa and elsewhere which, however, lacked an empirical basis. Campbell & MacPhail described peer education as "a method in search of a theory", and characterised their research

as a means of understanding the processes and mechanisms underlying peer education programmes. They highlighted the importance of expanding the theoretical base for HIV interventions, describing how quantitative evaluations are insufficient to capture the social interactions that co-determine their efficacy (2002: 332).

Conclusion: Treatment triumphalism? – The Southern challenge

During the first decade of the AIDS epidemic in the global North, infection cast doubt on the triumphalism of medical science which claimed ability to treat, cure and prevent diseases. However, two decades after the emergence of ART, HIV has become a chronic yet manageable illness in contexts of sustained, comprehensive, public treatment provision. The story of 'metropolitan HIV' – the epidemic in the global North – has been cast as one of medical triumph. While the introduction of massive ART programmes in the global South has begun to halt the effects of AIDS mortality and morbidity, a new and novel challenge has arisen: how to sustain record numbers of patients on life-long, chronic medicines as the pre-requisite to their continued survival. HIV researchers across the globe must increasingly contend with the discourse of 'treatment triumphalism', in which political leaders highlight the success of the global ART programme, but elide its weaknesses and challenges.

During the 1990s, and in the midst of its political transition from apartheid to democracy, South Africa became known as the epicentre of the global AIDS pandemic. By 1997 2.9 million South Africans were living with HIV, with the death rate exceeding 360 000 per annum. Vast resources were mobilised to research the epidemic's clinical, epidemiological and social determinants, and to develop 'evidence-based' responses (Nattrass, 2014: 237). Researchers, civil society, policy makers and government authorities in South Africa collaborated and clashed in the creation of knowledge about HIV/AIDS. Their work is part of the ever-changing global domain of knowledge about the epidemic.

Southern social scientists have contributed to understanding the HIV pandemic and to ensuring that available drugs will have optimal effect. They have drawn on the strengths of scientific method, while cautioning against universalism, and paying close attention to the specificities of context. South African HIV scholars put much of their effort into persuading the state of their arguments. The state was obliged to provide antiretroviral treatment (ART) – an ideal at the core of democratic redress in South Africa and enshrined in the Bill of Rights. Aware that HIV could easily be positioned as a problem of the global South,

researchers sought to reframe the epidemic as a global responsibility and challenge, responsive to amelioration with evidence-based, cautious and reflexive interventions.

South Africa faced (and still faces) concurrent epidemics of communicable and non-communicable illness. This 'quadruple burden' of disease placed extraordinary demands on relatively weak health systems – characterised by a lack of human resources, technologies and infrastructure (Coovadia *et al.*, 2009). Despite the prospect of 'pharmaceutical salvation' which ART portended, in Africa, Asia, Latin America and parts of Eastern Europe, AIDS remained a fatal disease for millions of people, reducing their life expectancy and quality of life (Comaroff & Comaroff, 2012: 42). More generally, it was an indication of third-world abjection, of the protracted difficulties of providing comprehensive healthcare to citizens. Since the state was obliged to provide this healthcare – an ideal at the core of democratic redress in South Africa and enshrined in the Bill of Rights – South African scholars put much of their effort into persuading the state of their arguments. Aware that HIV could easily be positioned as a problem of the global South, researchers sought to reframe the epidemic as a global responsibility and challenge, responsive to amelioration with evidence-based, cautious and reflexive interventions. In harnessing evidence from the social sciences to strengthen arguments for public health responses, researchers combined strategies – packaging qualitative evidence on the nuance and complexity of social experiences together with palatable graphs representing longitudinal studies, and therefore endowed with epistemological power of 'big data'.

In Southern Africa, clinics and communities continue to serve as fieldwork sites and study participants. However, the AIDS epidemic – in its scale and its urgency – has also provided an unprecedented opportunity for researchers and activists in the global South to intervene in, and reconfigure, this global knowledge domain. Principal investigators and first authors are often based in metropolitan institutions, but the challenges posed by the HIV epidemic in South Africa, including persistently high rates of HIV incidence among young people in particular, continue to catalyse novel, interdisciplinary research collaborations and interventions.[10] By 2015, South Africa had the world's largest ART programme, with 2.6 million people on HIV treatment. The challenge of sustaining one of the largest public health interventions in history, with patients' life-long adherence to medicines is a foundational objective.

[10] CAPRISA, DREAMS, Mzantsi Wakho and POP-ART are all examples of large-scale research studies that incorporate clinicians, health and social scientists and humanities scholars to combine interdisciplinary conceptualisations of HIV risk and its effective amelioration.

What Raewyn Connell terms the 'theoretical hegemony of the North' has characterised the emergence and evolution of the AIDS knowledge domain, across academic disciplines. On certain levels, the domain reproduces power asymmetries in the global production of knowledge. The global South continues to serve as a 'field site', a source of research participants and unprocessed data. However, as this paper argues, researchers in the global South, and at the epicentre of the AIDS epidemic in South Africa, have used their work to challenge epistemological hierarchies that privilege knowledge produced in the global North (Carrington *et al.*, 2015: 15). In the theoretical, methodological and contextual orientation of their research, 'Southern scholars' have contributed to shaping the global HIV/AIDS knowledge domain.

The South African researchers are not on the knowledge periphery. Conventional impact metrics, through which the value of research is measured and tallied, reveal their scholarly recognition and influence, both within the academic sphere of peer-reviewed publication, and within the practical sphere of policy documents and implementation plans by globe's largest health funding and development agencies. In South Africa, their engagement with activist groupings and policy makers has meant that their work is influential in policy and treatment practice. Abroad, their work has become part of an integral corpus of social science work that offers relational, gendered and embodied ways of understanding, and responding to, the epidemic.

Appendix 1:

Google Scholar search results for 'HIV Social Sciences South Africa', 19 February 2015

Authors	Title	Journal	Volume details
1. Campbell, C. (1997)	Migrancy, Masculine Identities and AIDS: The Psychosocial Context of HIV Transmission on the South African Gold Mines	*Social Science and Medicine*	45(2): 273-281.
2. Simbayi, L., Kalichman, S., Strebel, A., Cloete, A., Henda, N. and Mqeketo, A. (2007)	Internalised stigma, discrimination, and depression among men and women living with HIV/AIDS in Cape Town, South Africa	*Social Science and Medicine*	64: 1823-1831.
3. Dunkle, K., Jewkes, R., Brown, H., Gray, G., McIntyre, J. and Harlow, S. (2004)	Transactional sex among women in Soweto, South Africa: prevalence, risk factors and association with HIV infection	*Social Science and Medicine*	59: 1581-1592.
4. Campbell, C., Williams, B. and Gilgen, D. (2002)	Is social capital a useful conceptual tool for exploring community level influences on HIV infection? An exploratory case study from South Africa	*AIDS Care*	14(1): 41-54.
5. Lurie, M., Williams, B., Zuma, K., Mkaya-Mwamburi, D., Garnett,	The Impact of Migration on HIV-1 Transmission in	*Sexually Transmitted Diseases*	30(1): 149-156.

G., Sturn, A., Sweat, M., Gittelsohn, J. and Abdool Karim, S. (2003)	South Africa		
6. Gilbert, L. and Walker, L. (2002)	Treading the path of least resistance: HIV/AIDS and social inequalities—A South African case study	*Social Science and Medicine*	54: 1093-1110.
7. Cooper, D., Harries, J., Myer, L., Orner, P. and Bracken, H. (2007)	'Life is still going on': Reproductive intentions among HIV-positive women and men in South Africa	*Social Science and Medicine*	65: 274-283.
8. Jewkes, R., Levin, J., Penn-Kekana, L. (2003)	Gender inequalities, intimate partner violence and HIV preventive practices: findings of a South Africa cross-sectional study	*Social Science and Medicine*	56: 125-134.
9. Kalichman, S. and Simbayi, L. (2003)	HIV testing attitudes, AIDS stigma, and voluntary HIV counselling and testing in a black township in Cape Town, South Africa	*Sexually Transmitted Infections*	79: 442-447.
10. Campbell, C. and MacPhail, C. (2002)	Peer education, gender and the development of critical consciousness: participatory HIV prevention by South African youth	*Social Science and Medicine*,	55: 331-345.

Appendix 2: References for the top-10 Google Scholar citations for 'HIV Social Science' in South Africa

1. Campbell, C. 1997. Migrancy, Masculine Identities and AIDS: The Psychosocial Context of HIV Transmission on the South African Gold Mines. *Social Science and Medicine*, 45(2): 273-281.

2. Simbayi, L., Kalichman, S., Strebel, A., Cloete, A., Henda, N. & A. Mqeketo. 2007. Internalised stigma, discrimination, and depression among men and women living with HIV/AIDS in Cape Town, South Africa. *Social Science and Medicine*, 64: 1823-1831.

3. Dunkle, K., Jewkes, R., Brown, H., Gray, G., McIntyre, J. & S. Harlow. 2004. Transactional sex among women in Soweto, South Africa: prevalence, risk factors and association with HIV infection. *Social Science and Medicine*, 59: 1581-1592.

4. Campbell, C., Williams, B. & D. Gilgen. 2002. Is social capital a useful conceptual tool for exploring community level influences on HIV infection? An exploratory case study from South Africa. *AIDS Care*, 14(1): 41-54.

5. Lurie, M., Williams, B., Zuma, K., Mkaya-Mwamburi, D., Garnett, G., Sturn, A., Sweat, M., Gittelsohn, J. & S. Abdool Karim. 2003. The Impact of Migration on HIV-1 Transmission in South Africa. *Sexually Transmitted Diseases*, 30(1): 149-156.

6. Gilbert, L. & L. Walker. 2002. Treading the path of least resistance: HIV/AIDS and social inequalities—A South African case study. *Social Science and Medicine*, 54: 1093-1110.

7. Cooper, D., Harries, J., Myer, L., Orner, P. & H. Bracken. 2005. 'Life is still going on': Reproductive intentions among HIV-positive women and men in South Africa. *Social Science and Medicine*, 65: 274-283.

8. Jewkes, R., Levin, J. & L. Penn-Kekana. 2003. Gender inequalities, intimate partner violence and HIV preventive practices: findings of a South Africa cross-sectional study. *Social Science and Medicine*, 56: 125-134.

9. Kalichman, S. & L. Simbayi. 2003. HIV testing attitudes, AIDS stigma, and voluntary HIV counselling and testing in a black township in Cape Town, South Africa. *Sexually Transmitted Infections*, 79: 442-447.

10. Campbell, C. & C. MacPhail. 2002. Peer education, gender and the development of critical consciousness: participatory HIV prevention by South African youth. *Social Science and Medicine*, 55: 331-345.

Reference List:

Abdool Karim, S. S. & Q. Abdool Karim (eds.). 2005. *HIV/AIDS in South Africa*. Cape Town: Cambridge University Press.

----- & C. Baxter. 2005. Introduction. In Abdool Karim, S. S. & Q. Abdool Karim (eds.) *HIV/AIDS in South Africa*. Cape Town: Cambridge University Press, 37-45.

-----, Naidoo, K., Grobler, A., Padayatchi, N., Baxter, C., Gray, A. L., Gengiah, T., Gengiah, S., Naidoo, A., Jithoo, N., Nair, G., El-Sadr, W. M., Friedland, G. & Q. Abdool Karim. 2011. Integration of antiretroviral therapy with tuberculosis treatment. *New England Journal of Medicine*, 365: 1492-1501.

Agamben, G. (trans. D. Heller-Roazen). 1998. *Homo Sacer*. Stanford: Stanford University Press.

Beel, J. & B. Gipp. 2009. Google Scholar's Ranking Algorithm: An Introductory Overview. In Larsen, B. & J. Leta (eds.) *Proceedings of the 12th International Conference on Scientometrics and Informetrics*, 230-241. International Society for Scientometrics and Informetrics: Rio de Janeiro.

Biehl, J. 2001. Vita: Life in a Zone of Social Abandonment. *Social Text*, 19(3): 131–149.

Bonner, P., Delius, P. & D. Posel (eds.). 1993. *Apartheid's Genesis, 1935-1962*. Johannesburg: Ravan Press and Witwatersand University Press.

Cameron, E. 2005. *Witness to AIDS*. Cape Town: Tafelberg.

Campbell, C. 1997. Migrancy, Masculine Identities and AIDS: The Psychosocial Context of HIV Transmission on the South African Gold Mines. *Social Science and Medicine*, 45(2): 273-281.

----- & C. MacPhail. 2002. Peer education, gender and the development of critical consciousness: participatory HIV prevention by South African youth. *Social Science and Medicine*, 55: 331-345.

-----, Williams, B. & D. Gilgen. 2002. Is social capital a useful conceptual tool for exploring community level influences on HIV infection? An exploratory case study from South Africa. *AIDS Care*, 14(1): 41-54.

Carrington, K., Hogg, R. & M. Sozzo. 2015. Southern Criminology. *British Journal of Criminology*, doi:10.1093/bjc/azv083: 1-20.

Chakrabarty, D. 2007. *Provincialising Europe: Postcolonial Thought and Historical Difference*. Princeton, NJ: Princeton University Press.

Chiang, H. 1999. Double Alterity and the Global Historiography of Sexuality: China, Europe and the Emergence of Sexuality as a Possibility. *Episteme*, 2(1): 35-52.

Comaroff, J. & J. Comaroff. 2012. *Theory From The South: Or, How Euro-America Is Evolving Toward Africa*. London: Paradigm Publishers.

Connell, R. 2007. *Southern Theory: The global dynamics of knowledge in social science*. Cambridge: Polity.

-----. 2012. Gender, health and theory: Conceptualizing the issue, in local and world perspective. *Social Science and Medicine*, 74: 1675-1683

-----. 2014a. Rethinking Gender from the South. *Feminist Studies*, 40(3): 518-529.

-----, Collyer, F., Brownlee, P., Maia, J., Morrell, R. & R. Pearse. Forthcoming. Knowledge Practices and Democratic Futures: Toward a Southern Sociology of Knowledge. In press.

Cooper, D., Harries, J., Myer, L., Orner, P. & H. Bracken. 2007. 'Life is still going on': Reproductive intentions among HIV-positive women and men in South Africa. *Social Science and Medicine*, 65: 274-283.

Coovadia, H. M., Brown, E. R., Fowler, M. G., Chipato, T., Moodley, D., Manji, K., Stranix-Chibanda, L., Chetty, V., Fawzi, W., Nakabiito, C., Msweli, L., Kisenge, R., Guay, L., Mwatha, A., Lynn, D. J., Eshleman, S. H., Richardson, P., George, K., Andrew, P., Mofenson, L. M., Zwerski, S. & Y. Maldonado. 2012. Efficacy and safety of an extended nevirapine regimen in infant children of breastfeeding mothers with HIV-1 infection for prevention of postnatal HIV-1 transmission (HPTN 046): a randomized, double-blind, placebo-controlled trial. *Lancet*, 379(9812): 221-228.

-----, Jewkes, R., Barron, P., Sanders, D. & D. McIntyre. 2009. The health and health system of South Africa: historical roots of current public health challenges. *The Lancet*, 374(9692): 817-834.

Cornell, M., Technau, K., Fairall, L., Wood, R., Moultrie, H., van Cutsem, G., Giddy, J., Mohapi, L., Eley, B., MacPhail, P., Prozesky, H., Rabie, H., Davies, M. A., Maxwell, N. & A. Boulle. 2009. Monitoring the South African National Antiretroviral Treatment Programme, 2003-2007: The IeDEA Southern Africa collaboration. *South African Medical Journal*, 99(9): 653-660.

Coutsoudis, A., Dabis, F., Fawzi, W., Gaillard, P., Haverkamp, G., Harris, D. R., Jackson, J. B., Leroy, V., Meda, N., Msellati, P., Newell, M. L., Nsuati, R., Read, J. S. & S. Wiktor. 2004. Late postnatal transmission of HIV-1 in breast-fed children: an individual patient data meta-analysis. *Journal of Infectious Diseases*, 189(12): 2154-2166.

Crewe, M. 1992. *AIDS in South Africa: The Myth and the reality*. London: Penguin.

Dados, N. & R. Connell. 2012. The global South. *American Sociological Association*, 11(1): 12-13.

Davies, M. A., Boulle, A., Eley, B., Moultrie, H., Technau, K., Rabie, H., van Cutsem, G., Giddy, J., Wood, R., Egger, M. & O. Keiser. 2011. Accuracy of immunological criteria for identifying virological failure in children on antiretroviral therapy – the IeDEA Southern Africa Collaboration. *Tropical Medicine and International Health*, 16(11): 1367-1371.

-----, -----, Technau, K., Eley, B., Moultrie, H., Rabie, H., Garone, D., Giddy, J., Wood, R., Egger, M. & O. Keiser. 2012. The role of targeted viral load testing in diagnosing virological failure in children on antiretroviral therapy with immunological failure. *Tropical Medicine and International Health*, 17(11): 1386-1390.

-----, Egger, M., Keiser, O. & A. Boulle. 2009. Paediatric antiretroviral treatment programmes in sub-Saharan Africa: a review of the medical literature. *AJAR*, 8(3): 320-338.

Dunkle, K., Jewkes, R., Brown, H., Gray, G., McIntyre, J. & S. Harlow. 2004. Transactional sex among women in Soweto, South Africa: prevalence, risk factors and association with HIV infection. *Social Science and Medicine*, 59: 1581-1592.

Epprecht, M. 1998. The 'Unsaying' of Indigenous Homosexualities in Zimbabwe: Mapping a Blindspot in an African Masculinity. *Journal of Southern African Studies*, 24(4): 631-651.

Epstein, S. 1996. *Impure Science: AIDS, Activism, and the Politics of Knowledge*. Berkeley: University of California Press.

Estill, J., Aubriere, C., Egger, M., Johnson, L., Wood, R., Garone, D., Gsponer, T., Wandeler, G., Boulle, A., Davies, M. A., Hallett, T. B. & O. Keiser. 2012. Viral load monitoring of antiretroviral therapy, cohort viral load and HIV transmission in Southern Africa: a mathematical modelling analysis. *AIDS*, 26(11): 1403-1413.

Fairall, L., Bachmann, M. O., Lombard, C., Timmerman, V., Uebel, K., Zwarenstein, M., Boulle, A., Georgeu, D., Colvin, C. J., Lewin, S., Faris, G., Cornick, R., Draper, B., Tshabalala, M., Kotze, E., van Vuuren, C., Steyn, D., Chapman, R. & E. Bateman. 2012. Task shifting of antiretroviral treatment from doctors to primary-care nurses in South Africa (STRETCH): a pragmatic, parallel, cluster-randomised trial. *Lancet*, 380(9845): 889-898.

Florida, R. 2015. The world is spiky. *The Atlantic Monthly*, 296(3): 48-51.

Gevisser, M. & E. Cameron (eds.). 1994. *Defiant Desire: Gay and Lesbian Lives in South Africa*. Johannesburg: Ravan.

Ghosh, B. 2015. Introduction: Virus. In Juhasz, A. & A. Lebow (eds.) *A Companion To Contemporary Documentary Film*, 273-297. Oxford: Wiley Blackwell.

Gilbert, L. & L. Walker. 2002. Treading the path of least resistance: HIV/AIDS and social inequalities—A South African case study. *Social Science and Medicine*, 54: 1093-1110.

Gillespie, S., Kadiyala, S. & R. Greener. 2007. Is poverty or wealth driving HIV transmission? *AIDS*, 21(7): s5-s16.

Gorbach, P., Pines, H., Javanbakht, M., Weiss, R., Jeffries, R., Cranston, R., Fuchs, E., Hezerah, M., Brown, S., Voskanian, A. & P. Anton. 2014. Order of Orifices: Sequence of Condom Use and Ejaculation by Orifice During Anal Intercourse Among Women: Implications for HIV Transmission. *JAIDS*, 67(4): 424-429.

Grebe, E. 2012. *Civil society leadership in the struggle for AIDS treatment in South Africa and Uganda*. PhD thesis, University of Cape Town, Cape Town.

Grünkemeier, E. 2013. *Breaking the Silence: South African Representations of HIV/AIDS*. London: James Currey.

Hassim, S. 2006. *Women's Organizations and Democracy in South Africa: Contesting Authority*. Scottsville: University of KwaZulu-Natal Press.

----- & C. Walker. 1993. Women's studies and the women's movement in South Africa: Defining a relationship. *Women's Studies International Forum*, 16(5): 523-534.

Herwitz, D. 2012. *Heritage, Culture, and Politics in the Postcolony*. New York: Columbia University Press.

Henderson, P. 2011. *AIDS, Intimacy and Care in Rural KwaZulu-Natal: A Kingship of Bones*. Amsterdam: Amsterdam University Press.

Hicks, D. 2004. The Four Literatures of Social Science. In Moed, H. F., Glänzel, W. & U. Schmoch (eds.). *Handbook of Quantitative Science and Technology Research*, 473-496. New York: Kluwer Academic Publishers.

Hodes, R. 2014. *Broadcasting the Pandemic: A History of HIV/AIDS on South African Television*. Cape Town: HSRC.

-----. 2015 *The case of the absent ambulance: when the line between research study and intervention vanishes*. Backstage at the magic show: blips, quandaries and disasters in HIV research; 11 June 2015, Durban: Southern African AIDS Conference.

Jewkes, R., Fulu, E., Roselli, T. & C. Garcia-Moreno. 2013. Prevalence of and factors associated with non-partner rape perpetration: findings from the UN Multi-country Cross-sectional Study on Men and Violence in Asia and the Pacific. *The Lancet Global Health*, 1(4): e208-18 http://dx.doi.org/10.1016/S2214-109X(13)70069-X.

Johnstone, F. A. 1976. *Class, Race, and Gold: A Study of Class Relations and Racial Discrimination in South Africa*. London: Routledge and Kegan Paul.

Joint United Nations Programme on HIV/AIDS & World Health Organization. 1998. *Report on the Global HIV/AIDS Epidemic*. Geneva.

Khabsa, M. & C. L. Giles. 2014. The Number of Scholarly Documents on the Public Web. *PLoS ONE* 9(e93949): doi:10.1371/journal.pone.0093949.

Kippax, S., Crawford, J., Davis, M., Rodden, P. & G. Dowsett. 1993. Sustaining safe sex: a longitudinal study of a sample of homosexual men. *AIDS*, 7(2): 257-263.

Latour, B. & S. Wolgar. 1986. *Laboratory Life. The construction of scientific facts.* Princeton, NJ: Princeton University Press.

Levin, A. 2005. *Aidsafari: A Memoir of My Journey with AIDS*. Cape Town: Zebra Press.

Lewis, D. 2001. African feminisms. *Agenda*, 50: 4-10.

Lurie, M., Williams, B., Zuma, K., Mkaya-Mwamburi, D., Garnett, G., Sturn, A., Sweat, M., Gittelsohn, J. & S. Abdool Karim. 2003. The Impact of Migration on HIV-1 Transmission in South Africa. *Sexually Transmitted Diseases*, 30(1): 149-156.

MacGregor, L. 2005. *Khabzela: The Life and Times of a South African*. Johannesburg: Jacana.

Marks, S. & R. Rathbone (eds.). 1982. *Industrialisation and Social Change in South Africa: African Class Formation, Culture and Consciousness, 1870-1930.* London: Longman.

Mbeki, T. 2016. A Brief Commentary on the Question of HIV and AIDS. 7 March. http://www.thabombekifoundation.org.za/Pages/A-BRIEF-COMMENTARY-ON-THE-QUESTION-OF-HIV-AND-AIDS.aspx, accessed 30 March 2016.

McCulloch, J. 2002. *Asbestos Blues: Labour, Capital, Physicians and the State in South Africa*. Oxford: Oxford University Press.

Mishra, V., Assche, S.B., Greener, R., Vaessen, M., Hong, R., Ghys, P.D., Boerma, J.T., Van Assche, A., Khan, S. & S. Rutstein. 2007. HIV Infection does not disproportionately affect the poorer in Sub-Saharan Africa. *AIDS*, 21(7): s17-s28.

Montagnier, L. 2008. Acceptance speech for the Nobel Prize in Physiology or Medicine. Stockholm, 10 December, http://www.nobelprize.org/nobel_prizes/medicine/laureates/2008/montagnier-bio.html.

Moodie, T. D. & V. Ndatshe. 1994. *Going for Gold: Men, Mines and Migration*. Berkeley: University of California Press.

Morrell, R. 2016. Making Southern Theory: Gender researchers in South Africa. *Feminist Theory*, 17(2).

Morrell, R. & L. Clowes. 2016. The Emergence of Gender Scholarship in South Africa – reflections on Southern Theory. *CSSR Working Paper No. 381*. Cape Town: Centre for Social Science Research, University of Cape Town.

Mykhalovskiy, E. & M. Rosengarten. 2009. HIV/AIDS in its third decade: Renewed critique in social and cultural analysis – An introduction. *Social Theory and Health*, 6(3): 187-195.

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

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

-----. 2012. *The AIDS Conspiracy: Science Fights Back*. Johannesburg: Wits University Press.

-----. 2014. Millennium Development Goal 6: AIDS and the International Health Agenda. *Journal of Human Development and Capabilities*, 15(2-3): 232-246.

----- & G. Gonsalves. 2009. Economics and the Backlash against AIDS-specific Funding. *CSSR Working Paper No. 254*. Cape Town: Centre for Social Science Research, University of Cape Town.

Onyancha, O. B. 2008. Authorship patterns of the literature on HIV/AIDS in Eastern and Southern Africa: an exposition of the responsible authors, institutions and countries, 1980-2005. *South African Journal of Libraries and Information Science*, 74(1): 9-22.

Orrell, C., Levison, J., Ciaranello, A., Bekker, L. G., Kuritzkes, D. R., Freedberg, K. A. & R. Wood. 2013. Resistance in pediatric patients experiencing virologic failure with first- and second-line antiretroviral therapy. *Pediatric Infectious Diseases Journal*, 32(6): 644-647.

Parle, J. 2007. *States of Mind*. Scottsville: University of KwaZulu-Natal Press.

Pienaar, K. 2014. (Re)reading the political conflict over HIV in South Africa (1999 – 2008): a new materialist analysis. *Social Theory and Health*, 12(2): 1-18.

Poreau, B. 2015. Mapping South African public health research (1975-2014). *South African Medical Journal*, 105(1): 52-55.

Posel, D. 2000. A mania for measurement: statistics and statecraft in modern South Africa. In Dubow, S. (ed.) *Science and Society in Southern Africa*, 116-137. Manchester and New York: Manchester University Press.

-----. 2004. Sex, Death and the Fate of the Nation: Reflections on the Politicization of Sexuality and 'Nation-Building' in Post-Apartheid South Africa. *Africa*, 75(2): 124-153.

-----, Kahn, K. & L. Walker. 2007. Living with Death in a Time of AIDS: A Rural South African Case Study. *Scandinavian Journal of Public Health*, 35(69): 138-246.

Reddy, V. 1998. Negotiating gay masculinities. *Agenda*, 14(37): 65-70.

Republic of South Africa. 2006. *National HIV and Syphilis Antenatal Sero-Prevalence Survey in South Africa*. Pretoria: National Department of Health.

Robins, S. 2006. From 'Rights' to 'Ritual': AIDS Activism in South Africa. *American Anthropology*, 108(2): 312-323.

Rogers, R. 2009. The Googlization Question and the Inculpable Engine. In Becker, K. & F. Stalder (eds.) *Deep Search: The Politics of Search Engines Beyond Google*. Edison: Transaction Publishers.

Rosa, M. C. 2014. Theories of the South: Limits and perspectives of an emergent movement in social sciences. *Current Sociology*, 62(6): 851-867.

Rosenberg, C. E. & J. Golden (eds.). 1992. *Framing Disease: Studies in Cultural History*. New Jersey: Rutgers University Press.

Schneider, H. 2002. On the fault-line: The politics of AIDS policy in contemporary South Africa. *African Studies*, 61(1): 145-167, DOI: 10.1080/00020180220140118.

Scott, A. & M. Storper. 2014. The Nature of Cities: The Scope and Limits of Urban Theory. *International Journal of Urban and Regional Research*, 39: 1-15.

Serenko, A. & J. Dumay. 2015. Citation classics published in *Knowledge Management* journals. Part II: studying research trends and discovering the Google Scholar Effect. *Journal of Knowledge Management*, 19(6): 1335-1355.

Skinner, D. & S. Mfecane. 2004. Stigma, discrimination and the implications for people living with HIV/AIDS in SA. *SAHARA (Journal des Aspects Sociaux du VIH/SIDA)*, 1(3): 157-164.

Sontag, S. 1989. *Illness as Metaphor and AIDS and Its metaphors*. New York: Farrar Straus and Giroux.

Spradley, J. P. 1979. *The ethnographic interview*. Belmont, CA: Wadsworth Group.

Steinberg, J. 2008. *Sizwe's Test: A Young Man's Journey through Africa's AIDS Epidemic*. London: Simon and Schuster.

The World Bank. 1999. *Intensifying Action against HIV/AIDS in Africa: Responding to a Development Crisis*. Washington, D.C.: World Bank.

Thomas, K. 2014. *Impossible Mourning: HIV/AIDS and Visuality After Apartheid*. Johannesburg: Wits University Press.

Uthman, O. A. 2008. Prevalence and pattern of HIV-related malnutrition among women in sub-Saharan Africa: a meta-analysis of demographic health surveys. *BMC Public Health*, 8(226): DOI: 10.1186/1471-2458-8-226.

van Raan, A. F. J. 2004. Measuring Science. In Moed, H. F., Glänzel, W. & U. Schmoch (eds.) *Handbook of Quantitative Science and Technology Research*, 19-50. New York: Kluwer Academic Publishers.

van Zyl, G. U., van der Merwe, L., Claassen, M., Cotton, M. F., Rabie, H., Prozesky, H. W. & W. Preiser. 2009. Protease inhibitor resistance in South African children with virologic failure. *Pediatric Infectious Diseases Journal*, 28(12): 1125-1127.

Waldby, C. & R. Mitchell. 2006. *Tissue Economies: Blood, Organs and Cell Lines in Late Capitalism*. Durham: Duke University Press.

Whiteside, A. & T. Barnett. 2002. *AIDS in the Twenty-First Century: Disease and Globalisation*. London: Palgrave MacMillan.

Whiteside, A., Wilkins, N., Mason, B. & X. Wood. 1995. *The impact of HIV / AIDS on planning issues in KwaZulu-Natal*. Durban: USAID.

Wolpe, H. 1972. Capitalism and cheap labour-power in South Africa: from segregation to apartheid. *Economy and Society*, 1(4): 425-56.

World Health Organisation (WHO). 2013. *Consolidated guidelines on the use of antiretroviral (ART) drugs for treating and preventing HIV infection: Recommendations for a public health approach*. http://apps.who.int/iris/bitstream/10665/85321/1/9789241505727_eng.pdf.

Yach, D. & P. Kenya. 1992. Assessment of Epidemiological and HIV/AIDS Publications in Africa. *International journal of epidemiology*, 21(3): 557-560.