

**POST-COLONIALITY AND THE MOVEMENTS AND
READINGS OF SCIENTIFIC AND LEGAL PRACTICES:
THE HISTORY OF HIV/AIDS IN AFRICA, PATENTS, AND THE
MULTILATERAL GOVERNANCE OF GENERIC DRUGS**

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THESIS SUMMARY

This thesis examines the history, political economy, and global response to HIV/AIDS in Africa. It is particularly interested in how Africa's colonial past and postcolonial struggles with European science and law influenced these issues. It therefore explores the many ways that the colonial encounter coloured how scientific knowledge about HIV/AIDS travelled to and was read and contested in Africa. In addition, it sets out how this encounter informed the political economy of debates about access to and the global governance of generic HIV/AIDS drugs in the continent.

It draws on an interdisciplinary and theoretically-informed scholarship to unpack these issues. However, it aims not to produce new theoretical insights or make original theoretical contributions to this scholarship. Rather, it seeks to contribute to and fill-in gaps in the historiography of HIV/AIDS in Africa and scholarship on the global governance of generic HIV/AIDS drugs. Accordingly, it examines two areas that have not received adequate, academic attention in these areas. Firstly, Project SIDA—the first major research project on HIV/AIDS in Africa; and, secondly, the World Health Organization Prequalification Programme for Generic HIV/AIDS drugs—the primary, regulatory regime that governs the production, certification, and importation of generic HIV/AIDS drugs in the continent. It situates these subjects within a wider discussion about the colonial encounter and postcolonial struggles in Africa around European science and law. It argues that the encounter influenced how Project SIDA, and the scientific knowledge that it produced, was read and contested in Africa. It also contends that postcolonial struggles, especially around the global patent regime, informed the political economy within which the Prequalification Programme emerged and, importantly, the technical capacity of African generic manufacturers to certify their generic drugs for HIV/AIDS treatment programmes in the continent.

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INTRODUCTION

This thesis is interested in the history of HIV/AIDS in Africa and the global response to it, particularly around debates about access to, the local production and governance of generic HIV/AIDS drugs. Furthermore, it is interested in how Africa's colonial past and postcolonial struggles with European law and science influenced these issues. Specifically, it explores how the colonial encounter coloured how scientific knowledge about HIV/AIDS travelled and was read and contested in Africa. It also investigates how Africa's postcolonial struggles with European law, particularly the global patent regime, shaped debates about access to, and the local production and global governance of, generic HIV/AIDS drugs manufactured in the continent.

It focuses on two gaps on the historiography of HIV/AIDS in Africa and scholarship on the global governance of generic drugs. Firstly, Project SIDA—the first, major European and American research project on HIV/AIDS in Africa; and, secondly, the World Health Organization Prequalification Programme for Generic HIV drugs—the major, multilateral, regulatory regime that governs the local production, importation, and certification of generic HIV/AIDS drugs in the continent. It examines how the colonial encounter informed the way Project SIDA was established and how the scientific knowledge that it constructed was read and contested in Africa. It investigates how postcolonial struggles in Africa, especially around the global patent regime, coloured the context within the WHO Prequalification Programme emerged and governed and impacted the capacity of African generic manufactures to produce and certify their generic drugs for HIV/AIDS treatments programmes in the continent.

It unpacks these issues through an interdisciplinary and theoretically-informed scholarship, drawn from Post-Colonial Studies, Science and Technology Studies, and Legal Geography. The major theoretical concerns are with coloniality and post-coloniality (the colonial past, its racialised discourses and imaginaries, and their effects on postcolonial readings of law and science); geopolitics and the epistemics of place (the relationship, tensions, and intersections between cultural/political geography and the meanings and readings of knowledge); and institutional power

(the power of epistemic and legal institutions, and expert communities, to construct and legitimatise knowledge and govern its circulation). HIV/AIDS is thus examined not merely as a medical object, but as a site of global contestation, an intersection of debates about the meanings of coloniality and post-coloniality, the power of legal and scientific practice, and the overlapping significance of geo-politics and political economy in these elements.

However, it does not aim to develop new theoretical insights in Post-Colonial Studies, Science and Technology Studies, and Legal Geography scholarship. Rather it seeks to deploy concepts from these fields to frame and investigate three main research questions related to the history of HIV/AIDS (especially Project SIDA) in Africa, the political economy of patents and their relationship to debates about access to generic drugs in the continent, and the global governance and certification of these drugs in the continent (notably, through the WHO Prequalification Program). The three research questions are:

- 1 To what extent did Africa's colonial encounter with European science inform how scientific knowledge about HIV/AIDS was constructed, read, and contested in the Africa?
- 2 How did the colonial encounter and postcolonial struggles with European law in Africa, specifically around the global patent regime, shape the global response to HIV/AIDS and debates about access to and the local production of generic drugs in the continent?
- 3 How did the political economy of these struggles influence the global governance of the production, importation, and certification of generic HIV drugs in Africa?

It argues that the construction of scientific knowledge about HIV/AIDS in Africa, and its reading and contestations were shaped by the colonial encounter. It further contends that the global response to HIV/AIDS, particularly around debates about access to, and the governance and certification of, generic HIV /AIDS was informed by the encounter and postcolonial struggles in Africa around the global patent regime.

At a more theoretical level, the thesis argues that the movement and readings of scientific and legal knowledge about HIV / AIDS in Africa were deeply intertwined with the colonial encounter, the structural and sociocultural discourses and imaginaries about Africans that it left in place, and the subsequent postcolonial struggles that African states had with engaging, negotiating, remembering, and confronting the effects of this colonial past. The traces of the colonial past, the cultural and political geography of Africa that it constituted, is thus presented as a performative “actant” (Latour, 1987) or institutional factor that tinged legal and scientific practices about HIV/ AIDS, and their readings and contestations in Africa. It argues that these readings and contestations were, thus, part of a wider “epistemics of place” (Gieryn, 2006, p.113): a process of negotiating the intersections and tensions between “place” and practices of knowledge construction, travel, and reading; and, relatedly, practices to circumvent these tensions through geo-epistemic techniques—e.g., “Truth-Spots” (Gieryn, 2002); “Thing-Knowledge” (Baird, 2004), and geo-regulatory techniques.

METHODOLOGY

The thesis draws from scholarship and theories from Science and Technology Studies, Post-Colonial Studies, and Legal Geography. However, as already noted, the aim is not to develop new theoretical insights within this scholarship, but to use theories from this scholarship as frameworks to unpack the history of HIV/AIDS, the political economy of patents, and the governance and certification of generic HIV/AIDS drugs in Africa. Accordingly, some brief comments are needed to explain how these theories are understood and the way they will be used to engage with these subjects.

The first issue is with the meaning and use of “Africa” in this thesis. The concept of “Africa” is contested. It is fluid and complex and not easily subject to universal and stable definition. Much critical and post-colonial scholarship has unpacked and engaged with its contested meaning and highlighted its highly-political nature and uses—especially in Western thought and its problematic

intersection with ideas of race and socio-cultural difference (see, for example and most especially, Masolo, 1994; Mbembe, 2001 and 2013; Coetzee & Roux, 2005). There is, accordingly, much debate around the concept. Much has been written about its unstable analytic, ontological, historical, political, and socio-cultural boundaries (Mbembe, 2013; Wynne-Jones & Jeffrey Fleisher, 2015). The aim of this thesis is not, however, to bring new insights or make original contributions towards this scholarship. Thus, while acknowledging its contested meaning, “Africa”, for the purposes of this thesis, is used simply to mean Sub-Saharan Africa; that is, the geographic area encompassing countries below the Saharan desert.

In addition, and given its importance, some notes of clarification are needed about the socio-constructivist approach that the thesis takes towards the study of scientific knowledge; the way it deploys spatial or geographic concepts to examine the readings and movement of this practice; and the relationship it finds between colonialism and scientific and legal practice. This is, of course, not an exhaustive treatment of these issues—as they are addressed in far more detail in the theoretical chapter of this thesis— but, cursory notes and “signposts”, as it were.

As the thesis takes a socio-constructivist approach to scientific knowledge, and given the potential problems with such approach within the context of HIV/AIDS scholarship and politics in Africa (particularly with respect to ongoing sensitivities around “AIDS denialism” and etc. since the early 2000s in South Africa (Nattrass, 2008; Fourie & Meyer, 2010), it must be emphasised that, along the lines of “The Strong Programme” for the Sociology of Science (Bloor, 1991), the thesis seeks not to evaluate the validity or invalidity of scientific claims about HIV / AIDS. It aims to, rather, explore their sociocultural dimensions by situating their construction, travel, and cultural reading within a particular, historical, geopolitical context—within a particular time and place. Socio-constructivism, in this sense, is about the sociology of the knowledge constructed, its place and signification in social life, and the various readings that are given to knowledge as a historical, and emergent, social object and field of practice and, as we shall see, contestation. Accordingly,

and to quote Sismondo, the aim is to go against “Whig histories of science” that rest on: “the assumption that there is a relatively unproblematic rational route from the material world to correct beliefs about it...[and] a foundationalism...which accepted facts and theories ultimately rest on a solid foundation in nature” (Sismondo, 2010, p. 48).

Secondly, and relatedly, the thesis will make socio-spatial claims and raise questions about the construction, travel, and reading of scientific knowledge and legal practice; it will be interested in what Gieryn has phrased questions about the “epistemics of place” (Gieryn, 2006, p.113). This is not a reductionist, explicatory or causal assertion, however: in that, this not a claim that spatial issues singularly explain or can fully capture, if any theory ever can do such thing (Dobrin, 1997), the complexities and subtleties of the sociology and political economy of scientific knowledge about HIV/AIDS in Africa. As with the theme of coloniality and postcoloniality, a focus on spatiality is a point of emphasis, it is an act to highlight one feature of a very complex phenomenon so as to hopefully bring-in wider processes and issues than merely about space and geography. A cultural-geographical approach, at least in its Critical Geography tradition (Duncan, et. al., 2004; Anderson, 2010), aims to use spatial concerns as a “framing device”; it is not interested in spatial dimensions for their own sake, but as a window or way to engage with, or tease out, wider sociocultural and political processes (touching on, for example, race, gender, geopolitics, political economy, structural power, social and economic exclusion) that are implicated in the construction and circulation of scientific and legal knowledge, artefacts, and practices.

Thirdly, the thesis will be particularly interested in the relationship between colonialism and scientific and legal practice. As with cultural geography, the claim is not that colonial experience explains everything about the complexity, geopolitics, political economy, and history of HIV/AIDS in Africa. The argument is that, discourses about it, and sets of practices and imaginaries about Africa and Africans constructed as part of colonisation, tinged or reappeared in the socio-cultural readings and discourses, and epistemic and regulatory practices, about

HIV/AIDS in Africa. And these discourses and readings can, also, be used a framing device or window to reflect, more broadly, about the effects and instantiations of the colonial past on the postcolonial, socio-cultural life of African peoples and places.

In short, a socio-constructivist approach to the study of scientific knowledge is not a project to engage in debates about the validity/invalidity of scientific claims (this is something for the scientific community to decide by itself, according to its own particular rules of epistemic legitimation and validation); rather, it is an attempt to explore the socio-cultural dimensions of knowledge making, circulation, and signification; to makes sense of knowledge, even scientific knowledge, as a social thing or set practices that is intertwined in the messy, material world of “The Social”. As such, scientific work, and indeed legal practice, can therefore be implicated in cultural, political geography; in the particular histories, discourses, practices, memories, and geopolitics of a given place (i.e., Africa and colonial history). By focusing on cultural geography or coloniality, however, the claim is not that the complexities and subtleties of Africa’s relationship and encounter with HIV/AIDS can be reduced down, singularly, or made sense of through a focus on geography or coloniality. The claim is that, these factors can be a point of focus, a device or window through which wider, socio-cultural reflections can be made about the effects of cultural geography and colonialism on the history of HIV/AIDS in Africa and debates about access to, and the local production and governance of generic HIV/AIDS.

LITERATURE REVIEW

The research questions of this thesis are, in essence, about: the history of HIV / AIDS in Africa; the global, legal, and regulatory response to it; and the extent to which this history and response was influenced by the colonial encounter. The current literature on these lines of enquiry will be provided after which the summary of the chapters will be set out and the key contributions of the research will be stated.

Put broadly, recent academic interest on the history of HIV/AIDS in Africa and transnational patent governance can be traced to, among other things, two interrelated developments. Firstly, the emergence and coming into force of a new transnational patent regime in the 1990s: The World Trade Organisation's Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS). And, secondly, the significant increase by Euro-American institutions of, and the shift of policy by African states in the late 1990s towards, sero-epidemiological screening programmes for HIV in Africa.

In terms of TRIPS, and as will be explored in far more detail in chapters four and five of the thesis, the agreement substantively changed previous practice in transnational patent governance and, in effect, made it obligatory for all members of the WTO, including those that previously did not do so, to provide patent protection for pharmaceutical products. It required its signatories to afford foreign patent owners the power to stop WTO-members and their nationals from locally making or importing patented drugs without prior licence or subsequent compensation. It also provided a narrow, and later much criticised, public health derogation focused on the use of compulsory licences, available at times of national emergency, that many TRIPS-signatories without developed pharmaceutical industries found difficult to use within the context of HIV / AIDS drugs. (Roffe & Tansey 2006, Fairman, et al. 2012).

It is also worth noting that academic interest on TRIPS grew within the context of considerable, global protests against the transnational, economic and regulatory regime that emerged with the establishment of the WTO and the coming into force of many of its multi-lateral agreements, which regulated an expansive list of economic policy and subject matter, in countries in the Global South¹ (Bossche 2005; Wilkinson 2006; Steger 2010; Murphy 2010; Scholte 2011). Along with

¹ Commentary and protest particularly focused on, among other things: (1) The significant reduction of tariffs and customs schedules on wide range of product classifications and the liberalization of many service and manufacturing industries in the Global South to global competition; (2) the proliferation and application of National Treatment and Most-Favored Nation principles to many areas of domestic law and policy (i.e., requirements that national law treat, afford benefits and impose obligations to, domestic and foreign nationals equally); (3) the subordination of national

global protests, much legal and political commentary expressed reservations about, and, indeed criticised, the apparent subordination of national economies and spaces to the extra-territorial policing and discipline of the WTO (Wallach, et al., 1999; Shepard, et al., 2002; Jawara & Kwa, 2003; Halbert, 2005; Coriat, 2008; Deere, 2008; Narlikar, et al., 2012; Wood, 2012). The WTO was accused of, among other things: lacking democratic accountability and legitimacy; of subjecting national, political geographies to extra-territorial intervention; and of facilitating the transnational circulation of capital while restricting the capacity for these circulations to be governed and/or made accountable in the spaces within which they circulated—noticeably, in the Global South or Post-Colonial geographies.

So, when an alliance of Western, multinational corporations began using provisions of the TRIPS agreement in a campaign of legal and extra-legal challenges (with substantial diplomatic support from their respective governments) against States in the Global South that did, or sought to, legislate means to facilitate the local production and/or importation of generic HIV/AIDS drugs in the early 2000s, TRIPS joined a catalogue of WTO agreements that were already subjects of global protests (Pharma Marketletter, 1997; Pharma Marketletter, 1998; Smith, 2013; Poku & Whiteside, 2004). Within a short period, a transnational, activist network rapidly grew around challenging TRIPS. In many ways, the TRIPS and HIV/AIDS issue became a cause célèbre for all and anyone that held reservations about, if not contempt for, the WTO.

For many, if ever there was an archetypical representation of everything that was unconscionable about the WTO, this was it. TRIPS seemed to have given multinational corporations powers of immense, extra-territorial reach (Poku and Whiteside, 2004; Smith, 2013); the right, in effect and without adequate local accountability, to veto the sovereign acts of governments in the Global South even where it could result, the case of access to affordable

“policy space” and legislative sovereignty to the juridical control and extra-territorial, regulatory supervision of the WTO.

treatment in such places as Africa, in literally, millions of people dying or potentially dying as a consequence. Commercial interests and proprietary rights were, apparently, being given precedence over the lives of the most, vulnerable. In what way, some asked, could the WTO be accountable when it condemned those it, purportedly, claimed legitimised and, ultimately, benefited from its “single undertaking”?

By the early 2000s, after spiralling conflicts between health campaigners and Euro-American companies (especially in South Africa where a consortium of 40 or so Western corporations challenged an act promoted by Nelson Mandela), a package of reforms was negotiated and agreed by African and Euro-American governments about the TRIPS agreement. Amendments were proposed, waivers and declarations were issued, to the effect that the agreement was not to be interpreted or applied as limiting the capacity of signatories, especially African states, to respond to national, public health emergencies —particularly with respect to the local production and importation of generic, HIV/AIDS drugs (Roffe & Tansey 2006, Fairman, et al. 2012).

With respect to sero-epidemiological programmes and the shift of African opposition towards them, their proliferation resulted in a considerable increase in the volume and global dissemination of epidemiological data and reports about HIV/AIDS in Africa, which eventually lead to, among other thing: the establishment of a permanent epidemiological reporting and surveillance programme at the UN in the form of the United Nations Programme on HIV/AIDS (UNAIDS) and, later, a Global Fund to finance the procurement of, and a WHO scheme to prequalify and certify, HIV/ AIDS drugs exported to Africa and other geographies in the Global South.

From the mid-1980s, beginning with Project SIDA in Zaire, and growing in intensity and geographic scope in the late 1980s, Africa became a theatre of operations for a wide range Euro-American, academic and official institutions conducting HIV-screening programmes on growing sub-set of African populations—e.g., on civil servants, military personnel, commercial and migrant

sex workers, school children and, most particularly, pregnant women at antenatal clinics (this last group became a proxy for HIV prevalence in many African states) (Ronald, et al., 1988; Hunter, 1993; Karim, et al., 1998; Rennie, 2006; Weiser, et al., 2006).

The volume of programmes grew to such a scale that by the late 1980s the United States Census Bureau established a database, specifically and solely dedicated to Africa, to archive and disseminate the growing volume of scholarship and research in this area (a great deal of which came from Project SIDA); The Bureau also started constructing epidemiological projections and maps of Africa based upon HIV prevalence (Mann, 1992; Center for International Research (U.S.) Health Studies Branch, 1993). These projections and maps were brought together in HIV Country Profiles; sero-epidemiological data about the incidence and prevalence of HIV in all African countries where sero-epidemiological screening was taking place². They were published and updated periodically, distributed internationally, and the database became an important source of information for American agencies and it became, importantly, a reference point for the global epistemic community that was rapidly growing around Africa and its relationship to HIV/AIDS. And, by 1990s, a special United Nations programme on HIV/AIDS was established (UNAIDS), co-sponsored by a consortium of UN-agencies, the World Bank, which dealt with everything from women rights to child education, labour rights, economic development, food security, human rights, immigration and criminal law, and etc.

Images, sero-epidemiological maps, graphs, statistics, “country profiles”, newsletters on HIV/AIDS and Africa became, seemingly, pervasive. Representations of Africa having a special relationship with HIV/AIDS became widely accepted and propagated via various means; sero-epidemiological mapping made HIV/AIDS visible and global—it incorporated Africa into Euro-American, epistemic and regulatory projects around HIV/AIDS. So, when debates about access

² By the early 1990s, the database had 11, 000 records and 1, 500 publications specifically-dedicate to Africa (Mann, 1992).

to generic HIV/AIDS drugs and TRIPS reached its zenith in the mid-2000s (largely because of the advocacy work of UNAIDS and its associated NGOs, and its procurement programmes for HIV/AIDS drugs), Africa took centre stage. Out of any other geography in the Global South, Africa was the moral, political case against TRIPS. Images of, discourses around, dying Africans were deployed by the transnational network of NGOs and activists groups that campaigned against TRIPS, as their bio-political problematisation and case against the WTO and its single undertaking (the Treatment Action Campaign in South Africa, being a prime example) (Smith, 2013). The centralization of Africa in global discourses and representations about HIV/AIDS, thus, was intimately tied to wider discussions about transnational patent governance and pharmaceutical regulation.

Thus, for short: these two developments (the emergence of TRIPS and the growth of sero-epidemiological programmes) intertwined in the early 2000s when an impressive transnational network of public-health activists mobilised to increase affordable access to HIV/AIDS treatment in Africa. Sero-epidemiological statistics (including many from Project SIDA publications) were deployed by this network to make HIV/AIDS in Africa more visible and global and to campaign for the reform of TRIPS. The agreement was accused of, *inter alia*: taking away the sovereignty and policy space of African states to effectively respond to HIV / AIDS; and of artificially inflating the price and creating a shortage of drugs through the grant of quasi monopolies to foreign patent owners that, in the process, gave them *de facto power* to veto any acts or calls that sought to diminish their exclusive, commercial privileges. The production and dissemination of epidemiological statistics about HIV / AIDS in Africa, and protests against TRIPS, became, to health activists, different but related aspects of a multifaceted geopolitical and moral campaign.

As contestations over TRIPS and access to medicines spread and intensified, and the epidemiological situation in Africa grew in public awareness, and medical interventions by Euro-American and multilateral agencies multiplied across Africa in the late 1990s and early 2000s,

academic interest in the history and geo-politics of HIV/AIDS and patents in Africa, also grew; and very quickly, broader scholarship began to focus on the history of medical and legal interventions in Africa generally. Thus, although HIV/AIDS and patents often featured in the titles of academic papers, the undercurrent of, and the questions raised by, the emerging scholarship touched more and more on wider issues than merely HIV/AIDS and TRIPS. For those that wondered beyond these two narrow issues, and developed a curiosity about the history of previous European legal and medical interventions in Africa, particularly the role that the colonial past played in what was taking place around HIV/AIDS in Africa, became an issue that had to be directly confronted; or at least, as was most often the case, cited as an object of consideration in footnotes and passing comments. A review of this scholarship will now be briefly described, beginning with the historiography of HIV/AIDS in Africa then moving to; scholarship on the relationship between TRIPS, access to generic HIV/AIDS drugs, and public health policy in the Global South generally; literature on the transnational governance of the procurement and importation of generic HIV/AIDS drugs; and, finally, the scholarship on the relationship between all these issues and the colonial past.

THE HISTORIOGRAPHY OF HIV/AIDS IN AFRICA AND COLONIAL MEDICINE

Despite the enormous volume and catalogue of work on the history of HIV / AIDS in Africa, a great many of it concentrates on recent history and how the placement of Africa at the centre of global discourses and representations of HIV/AIDS has, *inter alia*, affected Africans and their communities and economy, and their sense of self as sexual, gendered, racialised, political, global, and social subjects (Hunter, 2003; Epprecht, et al., 2008; Barz & Cohen, 2011; Fassin, 2013). Outside of identity politics, there is, also, a growing literature on the political economy of the transnational industry of NGOs, charities, consultants, UN-agencies, etc. that have sprouted

around HIV/AIDS programmes in Africa (Evensen & Stokke, 2010; Grebe, 2011; Flint, 2011; Johnson & Johnson, 2012; Crane, 2013).

When it comes to the early “history” of HIV/AIDS in Africa (that is, 1982-1985), however, the volume and variety of scholarship narrows. The early history has mostly been written by the scientific/medical community. It tends to provide what the community designates as “natural histories”; that is, historical accounts of—or, rather, literature review on— medical knowledge about the microbiology, epidemiology, and pharmacotherapy of HIV/AIDS as it emerged in relation to Africa and African populations (Quinn, et al., 1986; Schneider & Drucker, 2006 ; Lewthwaite & Wilkins, 2009; Pepin, 2011; Schneider, 2013). This has mostly involved tracing the scientific literature on HIV/AIDS in Africa through case-reports and sero-epidemiological studies of HIV prevalence in different parts of Africa in the mid and late-1980s.

Unfortunately, although there is a rich and varied body of socio-historical work on the early history of HIV/AIDS in Euro-American states, there is very little on Africa, per se, and, where there is, case studies on South Africa dominate Schneider, 2003; Echenberg, 2006; Fassin, 2013). This is so even if the earliest HIV/AIDS research in Africa took place in Central Africa, specifically Zaire, where Project SIDA was established. The project was a collaborative programme between the United’s States’ Centre for Disease Control and Prevention (CDC), National Institute of Health (NIH), and, the Belgium Institute of Tropical Medicine’s (ITM), among others; they established an impressive laboratory and, in a very short period of time, grew into a large-scale technical, financial, administrative, and logistical operation—employing a Zairian, support staff of about 300 by its first year of operation in 1984 (Cohen, 1997; Piot, 2012). In time, it published a huge volume of scientific literature on HIV/AIDS in Africa, many of which are still cited in scientific literature today. Except for short articles on it by some in the medical community (Cohen, 1997), and brief references to it by those that directly participated in it in interviews interviews

(Krause, 1988; Quinn, 1996; Curran, 1998; Piot, 2008), Project SIDA has been left, largely and unfortunately, unexplored.

However, within the body of socio-historical works that have examined the early history of HIV/AIDS in Africa (notably, those that have focused on South Africa), the impact of the colonial past on African readings and translations of knowledge about HIV/AIDS has been studied and noted (Schneider, 2003; Echenberg, 2006; Fassin, 2013). The focus on colonialism has been part of a growing interest in Post-Colonial Studies on the technical “tools of empire” –particularly, Colonial or “Tropical Medicine” and its links to Scientific Racism (Krause, 1988; Quinn, 1996; Curran, 1998; Piot, 2008). Scholarship on colonial medicine and science has sought to question and destabilise the grand narrative and universalist claims, and the discourse and imaginary, of Western science as a benign “civilising mission”; as a gift of Western progress and modernity to backwards, barbarian peoples in the Global South. It has, also, shed light on how, among many other things: the history of European science and medicine in the Global South is deeply political and controversial; it is inextricably linked to the colonial experience and the highly racialised treatment, imaginaries, and typologies of colonised peoples and geographies—of Africa and Africans— as Other and as spaces of cultural difference and pathological risk.

Scholarship from this line of thought has been keen to engage with the colonial past, to interrogate how the traces and remnants of colonial life coloured and tinged post-colonial readings and translations of HIV/AIDS. So, for example: when the African medical community and press accused Euro-American, scientists of racism in the 1980s over the theory that HIV/AIDS was a pathology of African origin, or when the South African government in the early 2000s resisted calls for it to expand its HIV/AIDS programmes because it questioned the link between HIV and AIDS, Post-Colonial scholarship placed these translations and readings of HIV/AIDS within the context of the colonial past (Youde, 2007; Echenberg, 2006; Fassin, 2013); that is, within a living, collective, social memory of a traumatised, colonized past. Accordingly, Post-Colonial

scholarship has emphasised that the Euro-American interventions of the 1980s and 1990s with respect to HIV/AIDS were not novel, but a continuation of a theme; another instantiation of a phenomenon of long, structural form and historical precedence.

TRANSNATIONAL PATENT GOVERNANCE, GENERIC HIV/AIDS DRUGS, AND COLONIALISM

As noted earlier, much of the academic interest on the history of HIV / AIDS in Africa has been linked to, among other things, two interrelated developments: the impressive expansion of sero-epidemiological programmes on HIV/ AIDS in Africa, which have made the incidence and prevalence of HIV/AIDS in Africa more visible and global, and the emergence of a new patent regime as a result of the coming into force of WTO's Trade - Related Aspects of Intellectual Property Agreement (TRIPS). As a result of the former, specific provisions of the TRIPS agreement that regulate the local production and importation of generic pharmaceutical products, have become the subject of much legal commentary in light of accusations made by transnational health campaigners, HIV / AIDS activists, and governments in the Global South, including many from Africa, that TRIPS unduly restricts their “policy space” and capacity to effectively respond to national health emergencies such as HIV / AIDS in Africa. Because of the size of legal scholarship on this subject matter, scholarship in this area has been schematically divided here into three streams: (1) Policy-driven, doctrinal commentary: (2) Cost-benefit and commercial-diplomacy analysis: (3) Theoretical, socio-legal critique.

The biggest category is, undoubtedly, policy-driven, doctrinal commentary on TRIPS. Literature of this sort is huge, varied, and growing (Harrelson, 2001; Kiehl, 2002; Scherer & Watal, 2002; Haochen, 2003 ; Dasgupta & Srivastava, 2003; Correa, 2005; Slater, 2009; Watson, 2009; Ping, 2012). For sake of simplicity, what unites it is a broad, common focus on the technical, doctrinal analysis of TRIPS. The thematic questions are on whether, and the extent to which, the WTO should amend TRIPS to expand or narrow the scope of special and differential treatment

in respect to how the agreement is applied and interpreted with respect to countries in the Global South—i.e., “Developing” and “Least Developing” Countries. Particular attention is directed at, firstly, TRIPS and its public health exemptions and national emergency derogations; and, secondly, other flexibilities, such as compulsory licences, international and regional exhaustion principles, parallel importation, anti-trust and competition law, and/or other means to facilitate the local manufacture or importation of generic HIV/AIDS drugs. As a species of doctrinal commentary, this scholarship, understandingly and expectedly, tends not to be particularly concerned with sociocultural theorisations of TRIPS or public health.

The second stream is cost-benefit analysis (Okediji, 2003; Oliveira, et al., 2004; Subhan, 2006; Orsi, et al., 2007; Greenhalgh & Rogers, 2010; Orsi & D'almeida, 2010; Ghidini, et al., 2014). Literature in the field uses case studies, economic indicators and measures, and theory to assess the economic impact of TRIPS on public health and procurement policy, the balance of trade, technology transfer and innovation, licensing fees revenues and costs, domestic competition and abuse of dominant position, etc. And, since the package of reforms on TRIPS in the early 2000s (as mentioned above), literature on the “Implementation Game” (Deere, 2008) —that is, investigations about the costs and how governments in the South have or have not translated TRIPS in domestic law and practice—has also grown in this stream (Correa, 1998; Correa, 2000; Chaudhuri, 2005; Coriat, 2008; Babovic & Wasan, 2011). As with doctrinal analysis, little or no sociocultural critique is evident.

On this same stream is scholarship on commercial diplomacy and the drafting history (the “*travaux préparatoires*”) of TRIPS (Fluehr-Lobban, 2000; Correa & Yusuf, 2008; Crowne, 2011; Taubman, et al., 2012; Gervais, 2012). This literature tends to focus on the epistemic communities and interest groups, the Western, multinational corporations and commercial associations, that lobbied their governments to make transnational patent governance a “trade-related” issue with respect to WTO. Although sociocultural critique is, by and large, absent in this literature, its major

contribution has been to highlight how TRIPS was drafted with the commercial and industrial interests of Euro-American, commercial associations in mind; especially those sectors engaged in the high-technology and “knowledge economy” (the sectors that, throughout the 1980s, feared a loss of license-fee revenue, and faced intense competition from, Asian and Latin American manufacturers).

The third stream, and less researched area of scholarship, has been socio-legal, critical critiques of TRIPS. In this stream very little scholarship exists on Africa specifically, with the exception of Cloatre’s work (Cloatre, 2013) on the subject, and work that has examined TRIPS and patents, broadly, has interrogated and unpacked the proprietary discourses that have stabilised and legitimatised the global circulation of Euro-American patent law in the Global South. The aim has been to call for alternative imaginations, historical narratives, and conceptualisations of patent law that take into account its socio - historical contingency and potential to be a flexible tool of social and economic activity. Particular critique and criticism has therefore been directed at the tendency for transnational patent regimes, such as TRIPS, to act as a homogenising and westernising institution in, and proprietary technique of extracting value from, the Global South (Drahos & Braithwaite, 2002; Drahos, 2010; May & Sell, 2006).

The only work that has specifically focused on Africa, and has critically engaged with and theorise about the transnational circulation of TRIPS in Africa and its intersection with debates about access to affordable HIV / AIDS drugs, has been Cloatre's recent book (Cloatre, 2013). Drawing from Science and Technology Studies, particularly Actor Network Theory, she has traced the local translations of TRIPS within the routine, day-to-day, technical practices and discourses of healthcare professionals and policy networks in Ghana and Djibouti. She has followed these networks as they have negotiated and deployed patents in technical practices to procure, import, register, and distribute HIV / AIDS drugs. Along the way, she has theorised and situated these practices among wider heterogeneous networks of “actants”, human and non-human assemblages,

that stabilise and bring local meaning to patents as, among other things: regulatory objects; local and global artefacts; and, most interestingly, boundary fields that blur the lines between, and intersect across, legal and non-legal forms of life. The work, by examining local case studies also touches on the spatial/geopolitical dimensions of transnational patent governance. It highlights, even if not as a focus of critique, the significance of "the local", the importance of micro-geographies and practices, as sites of sociological enquiry and nodes of transnational patent governance and translation. Besides Cloatre, however, and a smaller number of scholars that have critically engaged with the political economy of TRIPS (Sell, 2003), and the global access to knowledge movement (noticeably Gaëlle Krikorian and Amy Kapczynski's edited book (Krikorian & Kapczynski's, 2010)), critical scholarship and theorisation of TRIPS and public health has been most limited.

COLONIAL ENCOUNTERS AND THE EMERGENCE OF TRANSNATIONAL PATENT REGIMES IN AFRICA

Despite the symbolic and political significance of Africa in much of the commentary around TRIPS and transnational patent governance, very little socio-historical work, including that of Cloatre, has traced how patent law came to be transplanted in Africa in the first place. The link between TRIPS and the colonial past is often hinted at, mentioned in a paragraph or in passing, but not examined as a socio-legal subject of analysis in its own right. This is surprising given Post-Colonial Studies scholarship on the links between international (positivist) law and colonialism.

As with colonial science and medicine mentioned above, this scholarship has noted how the history of international law has been, also, deeply intertwined with the colonial encounter; that is, the racialised treatment and sociocultural problematisation of Africa and Africans through law as Other. This scholarship has highlighted how, *inter alia*, highly racialised constructions and problematisations of Africa were deployed to justify militarised interventions in Africa by European states and, eventually, incorporate the continent into the emerging, transnational,

positivist regime of the late 19th and early 20th century. Despite this literature, however, the story of the transplantation of patents in Africa, within and as an extension of the colonial context, has been left, largely, unexplored. Moreover, the connection between this colonial history and contestations that took place in the early 2000s with respect to TRIPS has not adequately been examined.

TRANSNATIONAL GOVERNANCE OF GENERIC, HIV/AIDS DRUGS

In addition, except for general literature on transnational public health and HIV / AIDS (Hein, et al., 2007), which typically only focus on patents (Aginam, et al., 2013), not much sociolegal scholarship has connected debates about TRIPS and access to generic HIV/AIDS drugs in Africa with wider questions about the transnational governance of generic drugs and their production and circulation. The question of TRIPS has, typically (except in Aginam, et al., 2013, for example) been studied as somehow distinct from the complex, regulatory regime that emerged with the establishment of the Global Fund in the early 2000s and the bulk importation of HIV/AIDS drugs through the World Health Organisation's Prequalification Programme for Generic HIV/AIDS drugs (a set of issues that is dealt with in much more detail later).

Since the establishment of the Global Fund and the WHO's Prequalification Programme, the circulation of drugs into Africa has been complicated by a technical regime of governance that governs the production and importation of drugs into Africa through the use of geo-regulatory techniques and discourses around risk and geography; that is, the Prequalification Programme has required all manufacturers from the Global South that supply (or, rather, aim pre-qualify so as to supply) UN-agencies and the Global Fund with generic drugs to certify, and open themselves up to inspection to establish, that their products are only manufactured from certified laboratories and facilities approved by the WHO and technical committees. As the Programme and the Global Fund dominate the transnational governance of generic HIV/AIDS drugs made in or exported to Africa, their technical specifications and geo-regulatory requirements have, significantly,

impacted—and, indeed, effectively regulated and governed the commercial and technical operations of—generic manufacturers in Africa. Since Africa lacks the many certified spaces required by the Programme, “TRIPS flexibilities” have become, for all practical purposes, irrelevant.

However, despite its immense influence in Africa and other post-colonial geographies, the Prequalification Programme, and its geo-regulatory techniques, has largely been left unexplored. The connection between it and TRIPS—and, accordingly, the colonial past—has not been adequately examined.

KEY CONTRIBUTIONS

The aim of the thesis is to address some of the gaps mentioned in relation to the history of HIV/AIDS in Africa, the multilateral governance of generic HIV/AIDS drugs, and the connection of colonialism to these two issues. As such, it makes two, key contributions to existing literature: the first, on the historiography of HIV/AIDS in Africa, and the second, on scholarship on the transnational governance of generic, HIV/AIDS drugs.

In terms of the former, it explores the first, major HIV/AIDS research project established in Africa in the early 1980s: Project SIDA. Despite its considerable institutional and historical significance, it has received very little critical attention. Drawing on Science and Technology Studies and Post-Colonial Studies scholarship, and its theorisation of space, the thesis unpacks how spatialized problematisations of Africa by colonial science coloured, or at least posed epistemic problems with respect to, principally, how Project SIDA constructed and legitimised scientific knowledge about HIV/AIDS in Africa and, subsequently, how African communities read and contested this knowledge. In terms of the latter, it contributes to literature on the transnational governance of generic, HIV/AIDS drugs by examining a transnational programme that has not received, also, adequate socio-legal analysis, mainly: the World Health Organization’s

Prequalification Programme for Generic HIV/AIDS drugs. This Programme has constructed the transnational, regulatory and technical regime that governs the licensing of generic drugs made or imported into Africa and has deployed many and various geo-legal and spatial techniques to do so. The techniques have gained substantial, structural and institutional power, not just in Africa, but within the wider, transnational regime and network of UN-agencies, Euro-American NGOs and foundations engaged in the mass importation of generic drugs to the continent; yet, the techniques, themselves, have not gained appropriate and commensurate critical attention despite their institutional weight. This thesis addresses this deficit.

CHAPTER SUMMARIES

Along the lines of these contributions and the research questions, the thesis is divided into six chapters. The first chapter is theoretical and presents the theories and concepts that will be drawn from Science and Technology Studies, Post-Colonial Studies, and Legal Geography to analyse the three substantive research questions. Chapters two and three address the first research question and thus look at colonial science, the history of HIV / AIDS in Africa, and the impact that colonialism had on African readings of scientific knowledge about the pathology. Chapters four and five answer the second research question and examine how the colonial encounter and postcolonial struggles in Africa informed debates about access to, and the local production and importation of, generic HIV/AIDS drugs in the continent. Chapter six deals with the third research question and explores the WHO Prequalification Program and the governance and certification of generic drugs in Africa. A short summary of each of the chapters follows.

The first chapter deals with theoretical issues and introduces the main conceptual tools and scholarship of the thesis from Science and Technology Studies, Post-Colonial Studies, and Legal Geography. It particularly focuses on the spatial dimensions of these disciplines and the question of postcoloniality as a technique of critical analysis and object of sociocultural study.

The second chapter begins to set out the historical context of African readings and translations of scientific knowledge about HIV / AIDS. It provides a background of colonial science and medicine, specifically Tropical Medicine, and the way that it constructed a particular, sociocultural and racialised discourse and imaginary about Africans as other. It highlights the relationship between these discourses/ imaginaries and the colonisation of Africa and the epistemology of European science—and, importantly, the way it studied Africans, translated European knowledge, and constructed Africa as a cultural geography.

The third chapter examines one of the key contributions of thesis, principally: Project SIDA and the movement, readings, contestations of scientific knowledge about HIV / AIDS in Africa. It also examines the connections between these readings and contestations with Africa's colonial past; the techniques that European scientists used to negotiate this past and construct "universal", "placeless", scientific knowledge; and, finally, the emergence of the global, epistemic community and network around HIV / AIDS in Africa—mainly, the establishment of UNAIDS.

The fourth chapter begins the shift away from questions about medicine and the history of HIV/AIDS in Africa to questions about law and regulation. The bulk of this regulatory and legal analysis takes place in chapters five and six, where issues about sovereignty, transnational patent governance and pharmaceutical regulation, are analysed within discourses and debates about the local production and procurement of generic HIV/AIDS drugs in Africa. The job of the fourth chapter is thus narrow: to provide a historical and geopolitical context for the themes and issues are examined in chapters five and six. Chapter four, thus, analyses the travel of European patent law to Africa as part of the colonisation process. It examines the connections between patent law and doctrine of territorial sovereignty, and investigates how sovereignty was denied to Africans and how this negation resulted in European patent regimes being established in African colonies and Africans being incorporated into the European, transnational patent regime of the 19th and early 20th century as subjected peoples. The second part of the chapter describes the national and

regional patent systems established by postcolonial, African states and investigates attempts by these states to reform transnational, colonial, patent system. It situates these attempts within a wider, global campaign or struggle by postcolonial governments to disassemble the institutions and traces of the colonial past, and to assert territorial claims over patents and their transnational governance. The third part traces, and provides the political economy and geopolitical context, of the emergence of the TRIPS agreement, which forms the main subject matter of analysis in the following chapter.

The fifth chapter begins to explore the global response to HIV/AIDS in Africa. It traces the early attempts by UN-agencies to export HIV/AIDS drugs to Africa and examines how these attempts intersected with global contestations about (the lack of) access to affordable medicine in Africa, and significantly, the role that transnational patent governance (i.e., the TRIPS agreement) played in governing the production, importation, and circulation of generic HIV / AIDS drugs in the continent.

The sixth chapter continues to explore the global response and addresses another key contribution to existing literature: The WHO's Prequalification Programme for Generic HIV / AIDS Drugs. This chapter traces the emergence of this multilateral regime and explores how it governs the multilateral procurement and certification of generic HIV / AIDS drugs imported into Africa. It focuses on the regime's certification requirements (i.e., the production and submission of technical, regulatory documents and the inspection and certification of manufacturing and laboratory facilities); and it investigates the institutional influence of these requirements in Africa and the technical capacity of generic manufacturers to meaningfully participate in its procurement programmes.

CHAPTER ONE: THEORETICAL FRAMEWORK

As the chapters of this research will suggest, the colonial encounter had a considerable impact on the early history of HIV / AIDS in Africa, the travel of patent law to the continent, and contestations about transnational patent governance and access to medicines in the late 1990s and early 2000s. African experiences with colonial medicine and science coloured how knowledge about HIV / AIDS was constructed and contested in the continent (as will be examined in chapters two and three). Colonial law, including and most especially international positivist law, played an important role in implanting patent law to Africa and establishing the basic, transnational regime under which African states would be treated under transnational patent regimes. Further, this colonial past also deeply influenced African attempts to reform the transnational legal regime they inherited and informed their campaigns, throughout the 1970s and 1980s, to build a different international economic order, anchored in a highly, territorialised concept of sovereignty and patent governance (as will be explored in chapter four). The question of, or rather tension between, coloniality and post-coloniality, and the geopolitics of this tension, is therefore important and deserves some attention.

This chapter introduces the key theoretical concepts that will be drawn from Science and Technology Studies, Post-Colonial Studies, and Legal Geography to analyse the thesis's research questions. It is of two parts; the first part defines "Postcoloniality", "Thing-Knowledge", and "Truth-Spots", and explains what is meant by the "epistemics of place". The second part introduces the field of Legal Geography and explains how law deploys space as a juridical and governing technique and unpacks the relationship between these techniques and institutional power and broader sociocultural processes.

The chapter argues that postcoloniality should not, or cannot only, be thought of as a form of structural rupture from the colonial encounter, but rather as a critical engagement with the lingering effects of colonial experience on the sociocultural and political life of peoples and places that were colonised. For, the traces left behind by colonialism are, potentially, "actants" that can

have an impact on the “epistemics of place” (Gieryn, 2006, p.113); the traces are performative, institutional factors that can influence how scientific knowledge is constructed, circulated, and is read, and is given epistemic and social cultural significance at a particular time and place. It argues that this epistemics can be circumvented by the use of, among others, two techniques—“Truth-Spots” (Gieryn, 2002) and “Thing-Knowledge” (Baird, 2004), both of which aim to standardised knowledge, make it more mobile and agile, so as to facilitate its movement and presentation as *As If* it is placeless and not subject to multiple geographies of reading. And, relatedly, it contends that legal practice also faces and engages in its own epistemics of place and indeed power, mainly: the potential of law to not only act and govern through spatial techniques, but, the potential of law to, also, be co-constituted and informed by the particular places within which it is enacted and given socio-cultural, political significance.

**PART ONE: POST-COLONIALITY STUDIES AND SCIENCE AND
TECHNOLOGY STUDIES AS THEORETICAL FRAMEWORKS TO STUDY
SCIENTIFIC WORK, KNOWLEDGE, AND ARTEFACTS IN A GLOCAL CONTEXT**

The field of Post-Colonial Studies has its roots in Oriental and Common Wealth Studies. It takes as its focus of academic inquiry the cultural, economic, political, legal, and artistic and literary life of the former colonies of Western states: the places that are now commonly called “Developing Countries” or “Countries of the Global South”—the cultural and political geographies that are, or have been, treated as “Other” in Western law and science. It investigates, among other things, the relationship and geopolitical exchange between European states (and their culture or systems of knowledge) and their former colonies. It is especially interested in the effects that colonial life left in place and the ways those that were colonized understand, negotiate, deal with, reconstruct, contest, or generally translate and make sense and speak of the colonial past (Childs & Williams, 1997; Gandhi, 1998; Young, 2001; Schwarz & Ray, 2004; Seth, 2012).

There are, however, debates among scholars about how to conceptualize and define the concept of Post-Coloniality. For the sake of simplicity, and without delving in the nuances and niceties of this ongoing debate, there are two basic positions, which are not absolute and have many schools of thought and gradations of point and emphasis (Childs & Williams, 1997; Gandhi, 1998; Young, 2001; Schwarz & Ray, 2004; Seth, 2012). On one side of scholarship, broadly speaking, postcoloniality is theorised as not being just a temporal moment (a “pre” and “post”), but, also, a substantive, structural transformation; that is to say, the old “ancien regime” is asserted to have ended with the dissolution of colonial administrations, bringing with it, as a consequence, a new epoch with its own particularities and peculiarities that justify analysing it as a distinct sociocultural and political order; as something that is new and completely different. On the other hand, there are those that challenge, often passionately, any conceptualisation of postcoloniality that goes beyond its mere temporal dimension. They accept that there are times and dates when colonial regimes formally ended, but contest the idea, to different degrees and from different foci and schools of thought, of presumptive structural transformations as a result of the end of these regimes; that is, the argument or presumption that the formal end of colonial administrations meant all the economic, legal, cultural, artistic, and political regimes and relationships of power that came with or were produced by it (the “institutional residues” of colonialism) died with the end of colonial states. To put it more simplistically, they challenge the idea that there was a *de facto* and substantive revolution after the *de jure* transfer of legal authority from colonial administrations to the states that followed them. The issue of “Neo-Coloniality”— the continuing and lingering endurance of colonial systems and forms of life in the sociocultural order of peoples of the Global South—, to those in this camp, remains a present, operative, and institutional actor in the life and social order of those that were colonised. Accordingly, a number of scholars in the Global South who subscribe to this neo-colonial school of thought (noticeably: Gandhi, 1998 and Ahluwalia, 2001), take arguments for Post-coloniality as a type of “structural transformation” as an attempt

to hide, negate, and by virtue of this perpetuate, the lingering institutions and effects of colonialism in the Global South.

POST-COLONIALITY AS CRITIQUE AND INTERROGATION OF THE COLONIAL PAST

With those concerns in mind, the concept of Post-Coloniality—for the purposes of this thesis—is not used to mean a substantive and structural rupture between colonial and post-colonial experience. Coloniality and Post-Coloniality are not viewed as separate, independent silos, or parallel lines, or clearly demarcated geo-political experiences and temporalities; there is not a clear line or moment to indicate where colonialism ends and post-colonialism begins (the line between the two are fuzzy and fluid and based upon time and place).

Accordingly, the concept of Post-Coloniality used in this thesis is narrow. Along the lines of some post-colonial scholars, it is taken to be an act of remembering, unpacking, and critically reflecting and engaging with the “aftermath”, shadow, traces, remnants, marks, and effects of colonialism as a geo-political, epistemic, material, and cultural project. To borrow from Anderson, it is to critically engage with “the present effects – intellectual and social – of centuries of ‘European expansion’ on former colonies and on their colonizers...through the concentrated examination of particular historical, political and cultural contexts” (Anderson, 2002) . On this point, Leela Gandhi describes such an engagement well when she describes post-colonial critique as, essentially:

A theoretical resistance to the mystifying amnesia of the colonial aftermath. It is a disciplinary project devoted to the academic task of revisiting, remembering and, crucially, interrogating the colonial past. ...[and, it could be added, its effects and traces]. (Gandhi, 1998, p.4)

In short, post-coloniality, for the purposes of this research is taken to mean: a reflective process of critically thinking about the experiences of previously-colonized places and peoples and their relationships and encounters with their former colonisers and their systems of thought and political order. As such, it is less a grand explanatory account of those relationships and more, simply: an attempt to unpack the many ways that “Post-Coloniality” is given meaning socially and politically within a given place and moment. As Helen Verran put it: the aim is to unpack “postcolonial moments” through a reflective act of “both making separations, and connecting by identifying sameness” (Verran, 2002, p.730).

POST-COLONIAL TECHNO-SCIENCE AND MULTI-SITED NARRATIVES OF GLOCALITY

As indicated by the history and travel of HIV / AIDS to Africa, which involved scientific knowledge and artefacts travelling from Europe and America and being translated in Africa, post-colonial critiques must also deal with the increasing complex, global dimensions of post-colonial encounters and exchange (the issue of globality).

This has meant, for some in Post-Colonial Studies, a commitment to take on and celebrate the “complexities of contact” and “sticky materiality of practical encounters” (Tsing, 2004, p.1) generated by post-colonial exchanges, flows, and relationships. This has been interpreted to mean, in some accounts, finding ways to understand how local events and narratives (e.g., the establishment of Project SIDA in Zaire in the 1980s, or the local manufacturing of generic HIV/AIDS drugs in different African states in the late 1990s) are connected to larger transnational geopolitical realities and relationships (e.g., Zaire’s colonial past with Belgium and Africa’s incorporation into the World Trade Organisation system). The suggestion is to think “glocally”, to borrow a trending term in Global Studies scholarship; that is, to think of the local—at national or regional level— not as something that is necessarily separated from the global and to imagine the global as something that is situated and in-placed somewhere. So, for example, as will be shown

in this thesis, HIV/AIDS may be global, but much of the expert community constructing and legitimatising medical/scientific knowledge about it in Africa, and much of the laws and regulatory regime governing what artefacts are accepted as safe and effective products and techniques to treat it in Africa are situated, geographically and epistemically, somewhere—mostly, in Euro-American states and their academic, commercial, and civic institutions. Suchman probably explains it best when she says to think glocally is to imagine the global as “circulatory systems characterized by specific moments of place-making” where “locally enacted effects are made to travel less through easy flows than through messy translations” (Suchman, 2011, p.Xiii). The buzzwords are translation and interconnectedness; how scientific knowledge and legal discourses about HIV/AIDS, originating in Europe-American states, are made sense of in Africa and given particular, geo-political and cultural readings. As Latour put it, it is “localising the Global”, or, in more expansive form:

... lay[ing] continuous connections leading from one local interaction to the other places, times, and agencies through which a local site is made to do something...as soon as the local sites that manufacture global structures are underlined, it is the entire topography of the social world that is being modified. Macro no longer describes a wider or a larger site in which the micro would be embedded like some Russian Matryoshka doll, but another equally local, equally micro place, which is connected to many others through some medium transporting specific types of traces. No place can be said to be bigger than any other place, but some can be said to benefit from far safer connections with many more places than others (Latour, 2005, p.176).

Anderson has taken it to mean a call for post-colonial scholars to write multi-sited narratives; as will be done in chapter three for example, this could mean following HIV/AIDS, as an epistemic project, as it travels from the United States, to Haiti, to Belgium, Zaire, Burundi, and etc. Such an approach calls for a concern and interest in how techno-scientific ideas, artefacts,

techniques move globally and how they are translated and given significance locally. That is to say, how techno-science (all those things and practices around constructing and stabilising HIV/AIDS in Africa, for example) becomes glocal. So, Anderson notes:

We need multi-sited histories of science which study the bounding of sites of knowledge production, the creation of value within such boundaries, the relations with other local social circumstances, and the traffic of objects and careers between these sites, and in and out of them. Such histories would help us to comprehend situatedness and mobility...and to recognize the unstable economy of “scientific” transaction (Anderson, 2000, p.726).

However, such attempts cannot only be descriptive or apolitical (as some have accused much STS scholarship to be); they should, also, be concerned with unpacking the geopolitics of interconnectedness, translation, and mobility. It is not enough to trace the lines of movement and circulation (to follow HIV/AIDS from America, to Haiti, to Belgium, and Zaire, as will be done here) it is also important to think about the patterns and linkages across the lines that are drawn: in other words, it is to also consider the geopolitics of these linkages and the questions of power that arise (as will be explored further below with respect to legal movements and colonialism). The reflective and critical dimension comes when one has to think about the question of power and difference in these circulations and glocal moments of meaning-making and problematisation; in other words, when one thinks about colonialism and its aftermath, Anderson argues:

Attention to the ‘complex border zone of hybridity and impurity’ should help us to understand how ideas about difference...are enacted, and disturbed, in the performance of technoscience...A postcolonial perspective might show us how scientific and technological endeavours become sites for fabricating and linking local and global identities, as well as sites for disrupting and challenging the distinctions between global and local. (Anderson, 2000, pp. 643-58)

In addition, importantly, to trace techno-science across the globe is to also follow its material artefacts. It is to follow the things and techniques that are used to do it and to facilitate its mobility and glocal translations. Besides ideas, which are highly important, techno scientific artefacts—such as, HIV/AIDS blood-screening kits, epidemiological case-reports, pharmaceutical drugs, and, indeed, patents— must be seen as having their own and particular, sociocultural significance. As will be elaborated below with respect to the centrality of materiality in Science and Technology Studies, they are the work and war-horses, as it were, of techno-science; they pervade the world of techno science; they clear the path for techno-scientific ideas to travel, to be made material, real, and in-placed. They are more than noise at the margins. Anderson further notes:

[anyone studying techno-science glocally must] include the material, literary, and social technologies used to stabilize facts at multiple sites, whether “standardized packages,” the infrastructures of classification and standardization, or “heterogeneous engineering”...But it would also need to account for the dispersion of technoscience, the generation of incoherence and fragmentation, which cannot be dismissed as mere “noise” at the margins of the system...Moreover, a rethinking of boundary objects, infrastructures, and implicated actors in relation to postcolonial hybridity might thicken the political texture of social worlds analysis and make its “topology” more nuanced. (Anderson, 2000, *ibid.*)

THE IMPORTANCE OF GEOGRAPHY, LABORATORIES, AND SCIENTIFIC ARTEFACTS IN SCIENTIFIC WORK

Issues related to the “dispersion of technoscience, the generation of incoherence and fragmentation” came up in the history of HIV / AIDS in Africa (as will be explored in chapter three). As HIV / AIDS travelled and was contested, the political and cultural geography of travel and contestation coloured and influenced its form and the diverse meanings attributed to it.

Accordingly, scholarship on epistemology and cultural/ political geography will now be considered.

In recent years, the idea of translation and materiality has taken hold in some circles of Science and Technology Studies scholarship. As cultural geographers have started exploring techno-science, they have begun to shed-light on the geographical and spatial dimensions of scientific practice. They have explored not only how scientific ideas are constructed spatially, but, also on how political and cultural geography informs science and how scientific ideas and artefacts are used and translated locally and regionally (Shapin, 1998; Livingstone, 2003; Livingstone, 2004; Rupke, 2011). However, to understand how this jump was made, it is worth first looking at the centrality of materiality in STS and how it came to be linked to concerns about space and epistemology.

THE SOCIO-MATERIALITY OF SCIENTIFIC WORK:

THE AGENCY AND PERFORMATIVITY OF NON-HUMAN ACTANTS

Science and Technology Studies (STS) is a field of academic study that takes as its focus the sociology of scientific communities, work, and knowledge practices. Its innovative, and to some highly controversial, aspect has been its socio-constructivist approach to the study of scientific knowledge and work. Guided by anthropological methods and sociological concepts, it investigates the scientific community and its practices as just another social activity. Scientific knowledge and practice is thus not treated as operating outside of social life. It is investigated as, itself, a socially embedded and informed practice. The only difference between it and other typical forms of social life is its technical nature; in that, it has, like other technical crafts or “tribes” and occupations, its own esoteric language, customs and conventions, and practices of meaning making and legitimation that are specific to itself, but, nevertheless open to sociological and anthropological methods of analysis like any other form of social activity. The academic aim has

thus been to open up the technical “black box” (Latour, 1987) (the technicality of scientific ideas, techniques, artefacts, and language) and unpack and lay bare its social circuits and connections; not in the sense of evaluating the internal validity of its epistemic claims, but as a way of observing how these claims are constructed, given legitimacy, materialised, circulated, and deployed and given meaning across various fields of social and institutional life. The aim is to situate scientific work in time and place; to place it within, and definitely not something divorced from, the messy, material, contingent, and complex world of “the social”. Some of the ways by which this social placement has taken place will now be described.

Since the emergence of STS in the 1970s and 1980s, and later Laboratory Studies as a related or sub field, materiality³ and space⁴ have had a prominent and salient, analytic and conceptual place in scholarship. The “following of scientists” (Latour, 1987) in STS has often meant describing and unpacking what Livingstone has called “the microgeography of knowledge-production” (Livingstone, 2004); it has meant examining scientists at particular spaces and moments, and, analysing the artefacts and techniques that they deploy to materialise, construct, translate, mediate, circulate, and legitimise their epistemic and ontological claims. In short, to follow scientists has meant to trace the material and epistemic “stuff” they deploy at and across different spaces and moments. As Bruno Latour has put it with respect to Laboratory Studies:

A...way of summarizing what we have learned...[is]: technoscience is made in relatively new, rare, expensive and fragile places that garner disproportionate amounts of researches; these places may come to occupy strategic positions and be related with one another...
(Latour, 1987, pp. 179-180)

³ E.g., “things”, techniques, artefacts; biochemical agents; laboratory tools, machines, and instruments; documents and “inscriptions”; and etc.

⁴ E.g., laboratories, field stations, museums, court-rooms, forensic sites, botanical gardens, lecture halls, and, as shall see, Technical Advisory Committees (TACs), etc.

...it seemed obvious to us...that if there existed building sites where the usual notion of constructivism should be readily applied, it had to be the laboratories, the research institutes, and their huge array of costly scientific instruments...[the] most sublime production is manufactured at specific places and institutions...(Latour, 2005, p.175)

Accordingly, in Actor Network Theory (ANT) particular interest has arisen on how material artefacts (i.e., “non-humans”) are assembled and deployed as social and epistemic agents implicated in practices of knowledge-building and stabilisation. That is to say, how artefacts are not merely passive “things”, background noise, or passive instruments, but, principal protagonists or “actants” (Latour & Woolgar, 1986; Latour, 1987); “Things made to act”, agents that do and perform things socially and epistemically. Agents that embody or “blackbox” knowledge; that pose epistemic, ontological, ethical, and social questions; that constitute the “socio-material” collective, network, assemblage, or “bricolage” (Latour & Woolgar, 1986; Latour, 1987) of human and non-human “actants” that heterogeneously construct and mediate what we call Knowledge and “The Social”⁵.

Knowledge in this socio-materiality is, therefore, not only about “subjectivity” (i.e., individual cognition and reasoning or rationality), but, also, materiality, or, more precisely, the hybridity and entanglement of knowledge/idea in the messy world of “stuff”⁶ and the questions that “Thing-Knowledge” (Baird, 2004) poses. Noting the centrality of socio-materiality in ANT, Alain Pottage has commented on how:

Most studies of material agency in science begin in the midst of things... But what really matters is not the simple materiality of these things –their mass, density, or spatial

⁵ E.g., laboratories, field stations, museums, court-rooms, forensic sites, botanical gardens, lecture halls, and, as shall see, Technical Advisory Committees (TACs), etc.

⁶ As Latour argues: “every assemblage that pays the price of its existence in the hard currency of recruiting and extending is, or rather, has subjectivity. This is true of a body, of an institution, even of some historical event which he also refers to as an organism. Subjectivity is not a property of human souls but of the gathering itself—provided it lasts of course. If we could retain this vastly expanded meaning of society, then we could again understand what Tarde meant when he said that ‘everything is a society and that all things are society’ (Latour, 2005)

definition— but rather ‘materiality’ as the kind of agency that is afforded by, elicited from, or ascribed to them. (Pottage, 2012, p.169)

Besides “stuff”, space or geography has also been shown to be an important actant. Besides the practices that stuff and scientists perform, the question of where scientists do these things, “the microgeography of knowledge-production” (Livingstone, 2004) has, also, been shown to matter a great deal (Shapin 1998, Livingstone, 2003; Livingstone, 2004; Amsterdamska 2008; Meusburger, Livingstone and Jèons, 2010). Space/geography (e.g, geo-political boundaries, court rooms, laboratories, lecture halls, field-stations, museums, ecclesiastical or religious spaces, parliaments) have been shown to matter in terms of informing how scientists go about their epistemic work, in terms of colouring how knowledge and techno-scientific artefacts are received, legitimated, materialised, and generally, made sense of. Setting out the project and set of questions that cultural geographers of Science should grapple with, Livingstone, a principal proponent of spatialising science, argues:

...While monumental efforts have gone into constructing “placeless places” for the pursuit of science, spaces that aspire to ubiquity, I believe there are questions of fundamental importance to be asked about all the spaces of scientific inquiry...My suspicion is that along the spectrum of scales from particular sites through regional settings to national environments, the “where?” of scientific activity matters a good deal. (Livingstone, 2003, p. 3)

Thus, it is the relationship and intersection between “the where” (the space of epistemic enactment or performance) and “the what” (the epistemic claim or artefact) that inform and order what epistemic moves, or “language-games” in Wittgensteinian terms, are meaningful and permitted within a given “form of life” or socio-epistemic space.

In short: the jump has been to not only ask how science uses space, but, how space shapes and colours science. This is not an attempt to reduce science to geographic accidents, but a pivot to think of geography as more than geo-physical environment or empty spaces to be filled in with ideas and stuff. It is to imagine geography and the idea of spaces a bit differently. It is to see geography as a political and cultural space that influences how scientific ideas and artefacts are made and, indeed, made sense of. By “making sense of”, this is understood broadly and includes moments when the very place of scientific practice or enactment influences the type of knowledge or artefact that is constructed and the properties that these objects have or are, socioculturally, attributed to possess. As indicated above, it is to unpack what he has called “the microgeography of knowledge-production” (Livingstone, 2004); it to be interested in what James Secord calls the ‘geographies of reading’ (Livingstone, 2005): it is to “place the view from nowhere” (Shapin, 1998).

So, geography can be an empty space that is filled in by ideas and stuff, but, it can also be an actant that colours the ideas and stuff that is brought into its space, especially when we imagine space as a social construction imbued and saturated with sociocultural meaning; as something that is not always passive, but, at times, pro-active and performative—that is, as an “actant”.

Specific focus on Livingstone and other epistemic geographers will be left for a moment. For now, there is a slight, needed digression to look at how the field of Critical or New Geography is connected to STS, before returning to how the likes of Livingstone have used the idea of space to make sense of how scientific knowledge is translated locally and glocally.

CULTURAL GEOGRAPHY AND THE PERFORMATIVITY AND SOCIO-MATERIALITY OF PLACE

This interest in spatiality-as an institutional “actant”—has much similarity with how the notion of space is used in Critical or “New” Geography. As in Critical Geography, the conceptual pivot has been to emphasise the performativity and power of spaces to actively do things and be

actants in social relationships and processes; that is, the capacity of certain geographies to be implicated in contestations over ideology, race, gender⁷, geo-politics, difference, etc.⁸

Furthermore, as in Post-Colonial Studies, Cultural/Critical Geography scholarship has sought to shed light on the “traces...marks, residues or remnants left in place by cultural life” (Anderson, 2010, p.7). This socio-archaeological interest in the excavation of place views place as a material repertoire and sociocultural repository of lived experience (Erlil & Nünning, 2008). As such, places are presented as having the capacity to archive the residues and traces of what came before; places store socio-political temporality and materiality (e.g., memories and narratives around colonial life); examples could be museums, monuments, libraries, memorials, road signs, place names, capital cities, civic and judicial buildings, heritage sites, political boundaries, etc. However, the archiving process is complex. How it operates and acts in socio-political time is not given (Erlil & Nünning, 2008), as the chapter on Project SIDA and African responses to it will indicate.

The “marks, residues or remnants left in place by cultural life” are not deterministic (Gieryn, 2000). How they—that is, the traces of colonial life, for example—are deployed in cultural memory is uncertain (Assmann, 2008). They can be forgotten (intentionally or passively by the slippage of time and shifts in the sociocultural value attributed to them) or re-imagined and deployed differently (Assmann, 2008; Esposito, 2008). When remembered and deployed, place—or, rather, sociocultural and material practices left in place—can order or colour, shade, stain, and tinge sociocultural temporality (e.g., “The Present” and “the Future”). Its remnants and marks can be excavated in language, norms, discourse, customs, monuments, institutions, legal orders,

⁷ See: Harvey, 2001; Pain & Smith, 2008; Thrift, 2008; Anderson, 2010; Casino, et al., 2011; Hubbard & Kitchin, 2011; Sullivan, 2011; Convery, et al., 2012.

⁸ Thus, as (Gieryn, 2000) has argued: place is not space—which is more properly conceived as abstract geometries (distance, direction, size, shape, volume) detached from material form and cultural interpretation.... Space is what place becomes when the unique gathering of things, meanings, and values are sucked out... Put positively, place is space filled up by people, practices, objects, and representations.

political memory, narratives, and, indeed, scientific knowledge and epistemology (as we shall see, particularly, in chapter three and four of this thesis).

TRUTH-SPOTS, THING KNOWLEDGE, AND THE FRICTION OF PLACE

Returning to STS and the specific question of space and epistemology, scholarship has emerged on what Gieryn has phrased the “Epistemics of Place” and “the paradox of place and truth” (Gieryn, 2006, p.113). The “Epistemics of Place” relates to the question of how knowledge constituted in certain places is translated for global legitimisation and travel and consumption; how knowledge or artefacts that embody knowledge, such as HIV/AIDS kits and pharmaceutical products, are made or represented to be “placeless” and universally legitimate. In STS, two techniques, among many, have been suggested: mainly, the construction of “Truth-Spots” and the deployment of “Thing-Knowledge”.

The idea of “Truth-Spots” was formulated by Tomas Gieryn. Like other ANT scholars before him (most especially Latour and a great deal of scholarship from Laboratory Studies), Gieryn argues that one way that the “Epistemics of Place” is negotiated is through the construction of standardised epistemic spaces/places that act to certify and validate knowledge. The typical example given by Gieryn is laboratories; for instance, laboratories, such as the one constructed by Euro-American scientist in Africa in the 1980s as part of their HIV/AIDS research, provide a “presumption of equivalence” in respect to the material environment within which knowledge is constructed and manipulated. A great deal of effort and time is expended, as indicated in chapter three and six of this thesis on certification and laboratories, in standardizing the architecture and artefacts of laboratories, routinizing the techniques used, regulating and policing who and what can enter. All of this is done so that laboratories, or spaces constituted into laboratory-like settings, can function as a quasi-warranty of epistemic authenticity, legitimacy, reliability, and validation. The point of Truth-Spots is to suspend questions of space and focus discussion on the knowledge generated and “black-boxed”. It permits scientist to act “as if” space

does not matter and as if knowledge is placeless. Gieryn, summarising much scholarship from *Laboratory Studies*, notes:

...The lab purifies nature and culture... Conformity to any code of behaviour is far easier to achieve (or presume) when normative expectations are emplaced in circumscribed and easily identified regions...The architectural landscape of a lab does more than define normatively appropriate behaviour. Physical surrounds routinize behaviour in a more mechanical way that does not depend upon manifest judgments of ethical propriety...if the laboratory itself, like the many machines inside, assumes an off-the-shelf cookie cutter arrangement of spaces, then scientists will be equivalently disciplined and routinized no matter where the lab happens to be geographically located. (Gieryn, 2002, p.113)

Similarly, Davis Baird (Baird, 2004), through his concept of “Thing-Knowledge”, has argued that “instrumental objectivity”, the type of knowledge generated by laboratory instruments (e.g., HIV-blood screening kits and T-cell counters), has the power to make the problem or question of space irrelevant. By constructing artefacts that can be presented as being objective and placeless, knowledge embodied and carried in those artefacts and techniques can be “black-boxed” and enclosed in standardised forms that are difficult to question or open.

These artefacts and techniques can become more than mere instruments. They can become objects of great epistemic and institutional significance in their own right—as we shall see with respect to the way that HIV-kits, and the results they generated, were used to establish and stabilise a transnational network around HIV/AIDS research in Africa. That is, in ANT terms, they can become actants; things with a perceivable presence or sense of agency, in that, they make epistemic and ontological claims, they constitute knowledge, and pose questions that has sociocultural effects and meanings. For example, standardized tests used in legal and bureaucratic practice (e.g., standardised instruments to test blood alcohol content, to measure psychiatric illness, to diagnose pathology, establish intelligence quotient) can have real and significant effects in the results that

they generate and the implications that arise from them. When validated by regulatory license, when justified through the force of law, their power can be immense. As Baird elaborates:

[Thing-Knowledge] is an epistemology opposed to the notion that the things we make are only instrumental to the articulation and justification of knowledge expressed in words or equations. Our things do this, but they do more. They bear knowledge themselves, and frequently enough the words we speak serve instrumentally in the articulation and justification of knowledge borne by things. (Baird, 2002, p.39)

Knowledge has been understood to be an affair of the mind. To know is to think, and in particular, to think thoughts expressible in words...I urge a different view. I argue for a materialist conception of knowledge. Along with theories, the material products of science and technology constitute knowledge. (Baird, 2004, pp. 21-40).

When standardised to the extent that their complexity is reduced to a performance that does not require much technical expertise or material expenditure, Thing-Knowledge can become “push button simple”; for example, the move, in the late 1980s with the construction and licensing of the first HIV-blood screening kits, away from diagnosing AIDS from complex laboratory tests to a single instrument—the HIV testing kit. With that, their mobility and circulation increases, the volume of knowledge that is generated grows, and the world and social spaces that can be made subject to it claims expands, as will be described when HIV-screening programmes proliferated in the 1980s and 1990s in Africa. Through the routinisation of Thing-Knowledge to “push-simple” form, place and individual subjectivity matters less and less; objective instrumentality creates its own world and establishes its own techniques and methods of justification (as argued in much Laboratory Studies scholarship prior to Baird's work).

However, as already suggested by the work of Livingstone, some STS scholars have been more cautious about the suggestion of place (of political and cultural geography) ever being

completely suspended or erased as an epistemic problem. Scientific knowledge, for these scholars, is always in-placed and translated somewhere. Despite their representation as placeless, how knowledge (for example, as we shall see in chapter three with respect to Out Of Africa theory of HIV/AIDS) is translated is subject to the cultural and political space within which it circulates and is made sense of.

That is to say, the practices and sociocultural requirements of what constitutes a Truth-Spot, for example, what sociocultural significance is attributed to knowledge claims generated through it, is vulnerable to multiple narratives of translations because of, in part, cultural and political geography; despite laboratories and standardised instruments, the political geographies of the colonies, as will be shown in chapter three, still significantly coloured how knowledge about disease was understood and translated locally. The objectivity of Thing-Knowledge, and the difficulty or ease of opening its black-box and unpacking its epistemic and ontological claims, and its legitimacy and authority, is subject to political and cultural geography. That is not to say that Thing-Knowledge and Truth-Spots do not have the characteristics that Baird and Gieryn, respectively, present. Rather, it is to say that the manner that they are constituted, and the sociocultural significance and meaning that is given to the knowledge that is generated, is informed by geo-cultural and political space, as Livingstone has previously noted:

...Scientific knowledge is not uniformly distributed across the face of the earth. Its complexion differs from place to place, and across the spectrum of scales. Because scientific knowledge is produced differently in different spaces, because it is confronted differently in different arenas, and because it migrates from one location to another, it makes sense to think of scientific enterprises as geographically constituted...because people, ideas, and instruments move from place to place, scientific undertakings disclose distinctive geographies of reception and consumption (Livingstone, 2004, p.140).

**SUMMARY: POST-COLONIALITY, TECHNO-SCIENCE, AND
CULTURAL/POLITICAL GEOGRAPHY**

To study and comment on techno-science in a context or moments of Post-Coloniality, we must be careful not to conceive of the postcolonial as, merely, rupture or a substantive break in the geopolitical relationships between previously-colonized geographies and Euro-American states. Rather, post-Coloniality is a reflective and critical engagement. It is to reflect about—and play “language-games” around— questions of power and difference in the geo-political encounters and intersections between colonised peoples and places and Euro-American state (and, indeed, epistemic communities and systems of knowledge). Post-coloniality, in this lens can be viewed as, among other things, a series of questions and a technique of thinking about power and the historical institutionalisation of colonial life and experience in modern form and contexts.

In addition, to study techno-science in Post-Coloniality is to be interested in, *inter alia*, not only the circulation and travel of ideas, but, the material artefacts, spaces, and techniques that are used to embody and materialise it and make it ready for global travel. These artefacts and spaces constitute knowledge. More than that, as suggested by the work of Baird and Gieryn (and much Laboratory Studies scholarship), they play fundamental roles in the packaging, standardisation, and circulation of knowledge. Whether as Truth-Spots or Thing-Knowledge, material artefacts and spaces are central in representations of techno-scientific knowledge as placeless and universal. They are the primary means and techniques of bracketing the question of place in the representation of knowledge.

However, as Livingstone, Shapin, and Anderson warn, we must also investigate how global and seemingly placeless, scientific knowledge and artefacts are translated, “read”, and confronted locally. That is, how the universal is also local and in-placed. Because techno-science takes place across multiple geographies and spaces, critical engagements with it must also be multi-sited and concerned with " the glocal and global" or, as Latour put it: it involves “lay[ing] continuous

connections leading from one local interaction to the other places, times, and agencies through which a local site is made to do something” (Latour, 2005, p.173).

PART TWO: LEGAL GEOGRAPHY AS A THEORETICAL FRAMEWORK TO STUDY THE SOCIOCULTURAL DIMENSIONS OF LEGAL PRACTICE AND KNOWLEDGE

Besides the issues of coloniality and post-coloniality, othering, and the structural and institutional power of transnational legal/regulatory regimes, the research questions of this thesis raise important, general questions about the political geography and spatial dimensions of law. Thus, the first question asks the extent to which Africa's colonial encounter with European science inform how scientific knowledge about HIV/AIDS was constructed, read, and contested in the Africa. The second question seeks to understand how the colonial encounter and postcolonial struggles with European law in Africa, specifically around the global patent regime, shape the global response to HIV/AIDS and debates about access to and the local production of generic drugs in the continent. Further, the third is interested in how the political economy of these struggles influenced the global governance of the production, importation, and certification of generic HIV drugs in Africa. These questions are therefore concerned with, among other things, the travel of law and regulatory artefacts (e.g. the movement of patent law and drugs to Africa), and the governance of political geographies through particular geo-regulatory techniques (e.g. the governance of drugs made or imported to Africa through, as will be shown in chapter six, certification and documentary practices based on particular facilities and laboratories that produce regulatory, technical knowledge and artefacts).

Since transnational, legal flows and travels, concern much of the second and third research questions (and most of chapters five and six), the second part of this chapter describes and examines scholarship from Legal Geography that specifically deals with the circulatory, spatial, and political dimensions of legal travel and translation. Moreover, as stated in the introduction of the

thesis, the focus on geographic issues is not an act to reduce the complex, regulatory and legal issues around HIV / AIDS and generic drugs to spatial problems. Like the thematic interest in colonialism and post-coloniality, the spatial interest is merely a point of emphasis and a means to unpack the geopolitical dimensions of the history of patent law in Africa and the political economy of the transnational governance of generic HIV / AIDS drugs made and imported into the continent. In other words, the claim is not that spatial questions matter, necessarily, more than other factors; rather, the claim is that spatial issues, among other things, are often not adequately taken into account as factors that are worthy of attention, despite their significance in legal practice and epistemology and the transnational governance of patents and pharmaceutical, HIV/ AIDS products.

Although Science and Technology Studies deals with the questions of place and epistemology, and, indeed political geography and regulatory practice, Legal Geography will be deployed because of its unique, specific focus on the subject matter and because of the range of scholarship in this discipline that deals with the particularities of the spatial, juridical, and regulatory dimensions of law. Accordingly, although Legal Geography and Science and Technology Studies both touch on the question of geography and epistemic practice (and thus overlap), the former is more focused and sensitive to the distinct form and content of law and will, thus, be used to unpack the more, blatantly “legal” aspects of the thesis' research questions; notably, research questions two and three on the transnational governance of generic drugs and the history of the implantation and travel of patent law in Africa within the context of the political and cultural geography of coloniality and postcoloniality.

LEGAL GEOGRAPHY AND THE SPATIALITY OF LAW

In Part One reference was made to the increasing interest in space in Science and Technology Studies (STS) scholarship, particularly the project by Livingstone and Shapin to shed light on the performativity and influence of space in scientific epistemology and practice; that is,

the argument that “the where” of scientific knowledge can matter as much, or least have an impact on, “the what”. Legal Geography has followed suit. Instead, space and science, the focus has been on the “law/space nexus” (Blomley & Bakan, 1992). Like STS and Critical Geography scholars, Legal Geography is also interested in the performativity and geo-politics of space or political/cultural geography. As Blomley and Bakan explain:

The construction of legal spaces is a central part of a broader process by which law and social life are interpreted. The representation and evaluation of space in legal discourse, as in the construction and value ascribed to mobility or the locality, is constituted by, and is in turn constitutive of, broader accounts of social and political life under law. Space, like law, is not an empty or objective category, but has a direct bearing on the way power is deployed and social life is constituted. The geographies of law are neither passive backdrops in the legal process nor of random import; they can, in combination with their implied claims concerning social life, be problematic and even oppressive (Blomley & Bakan, 1992, p.669).

The point being emphasised by Blomley and Bakan, and one that will be elaborated on by postcolonial legal scholars below, is that the interest in the spatial dimensions of law is not merely descriptive, but, also, an attempt to unpack the geo-politics of law: how spatial concepts and techniques order social life and processes and how political/ cultural geographies themselves also inform legal practice and epistemology. Accordingly, as Holder and Harrison (2002) have explained, this has meant, principally, two things, or ways of approaching and conceptualising the law/space nexus: An interest in what Holder and Harrison have phrased “Geography-In-Law” and “Law-in-Geography”. The former is about spatial concepts and techniques, whereas the latter relates to how these concepts and techniques interact with, and are co-constituted and informed by, the political/ cultural geographies within and through which they operate or are enacted.

So, with respect to “Geography-In-Law”, this thesis will, for example, examine how the WHO's Prequalification Programme for Generic HIV / AIDS drugs uses spatial techniques (that is, relies on the certification and location of manufacturing facilities and laboratories) to govern which generic drugs can or cannot be procured by UN-agencies or NGOs funded by the Global Fund. Similarly, in seeking to understand the power of the TRIPS agreement, it will examine how TRIPS governs the activities of its signatories by regulating the flow of generic drugs made or imported by compulsory licences.

The issue of “Law-in-Geography”, however, can be understood by looking at how, for example, the political/ cultural geography of colonialism informed the travel and translation of international law, generally, patent law specifically, to Africa (the subject matter of chapters six to eight of the research). The political and cultural geography of the colonies meant that law, the concept of sovereignty and the principle of territoriality attached to the grant of patents, was translated and made to fit the particular constructions and imaginary of Africa as an Other. The content of chapters four to six will, therefore, reaffirm what previously scholarship on “Law-in-Geography” has suggested, mainly that;

whereas the abstract application of legal doctrine and principles, and even the wholesale transplantation of a legal regime, might be viewed as unproblematic from a positivist perspective, a ‘Geography in Law’ approach suggests that law must make room, for local conditions and experience, and recognize the changing of laws to work in local contexts. The identification here is with ‘local legal universes’, or ‘legal localization’—forms of regulation rooted in local conditions of existence. (Jones, 2003, p.173)

THE INTERSECTIONS BETWEEN POST-COLONIALITY AND LAW-IN-GEOGRAPHY

Although the question of “Law-in-Geography” and post-coloniality has not preoccupied, until very recently, much legal geography scholarship, some noticeable exceptions have started to

directly unpack this relationship. The most prominent works in this area of scholarship are those of Antony Anghie and Tayyab Mahmud. In tracing the historical emergence and global diffusion of international positivist law, within which patent law was an appendant (as will be explored in chapter four), both authors present the colonial encounter as, if not a central factor, then; firstly, a significant mechanism or circuit that facilitated the transnational movement and implantation of positivist law to non-European geographies, peoples, and cultures and; secondly, an important geopolitical experience that left traces in the form, basic conceptual frameworks, and discourses of international law and the way it treats and problematises non-European peoples and cultures as subjects and objects of law. They therefore argue that the colonial encounter not only impacted “colonial law” but international law and transnational governance as currently practiced and experienced by peoples and geographies of the global south. For the likes of Anghie and Mahmud, the question of “Law-in-Geography”, the question of how geopolitics colours and co-constitutes law, is central to the historiography and encounters of international law in colonial and post-colonial contexts. It is also important in situating current contestations about law and its political economy (such as those that arose with respect to TRIPS and access to generic medicines in Africa in the 1990s and early 2000s).

Thus, for projects that seek to make sense of the travel of European law to colonial geographies (as will be attempted in chapter four with respect to patent law and emergence of the TRIPS’ legal geography), Mahmud argues that the object should be to trace the sociocultural construction and historical contingency of knowledge in place and time. That is, to challenge notions of abstract universalism in positivist law; to place law—and its geo-legal imaginaries and techniques—within the geo-politics or “Geographies of Power” of colonialism and imperialism. Alternatively, put more broadly, “to theorize the spatiality of global relations of domination and resistance under the shadow of international law”. Making plain his indebtedness to Critical

Geography and Critical Legal Studies, along with many other Post-Colonial scholars before him, Mahmud sets-out the agenda:

The agenda of Critical [legal] Geography...[should be] to explore the social construction of geographical space: how specific social formations produce specific geographies and how these geographies shape social change...Modern colonialism involved the geographical expansion of European States into other territories. The aim [should be] to uncover geometries of inclusion and exclusion in the genealogies and structures of Western disciplines of knowledge production. (Mahmud, 2007, p.528)

That is, as noted in part one of this chapter, a Post-Colonial critique of International Law should be taken as an act of remembering, unpacking, and critically reflecting on the “aftermath” (Gandhi, 1998), shadow, traces, remnants, marks, and effects of colonialism as a geo-political, epistemic, legal, and cultural project. To borrow from Anderson, it is to critically engage with “the present effects – intellectual and social – of centuries of ‘European expansion’ on former colonies and on their colonizers...through the concentrated examination of particular historical, political and cultural contexts”. To re-emphasize Leela Gandhi’s position on this point: post-colonial critique is, essentially, a theoretical resistance to the mystifying amnesia of the colonial aftermath. It is a disciplinary project devoted to the academic task of revisiting, remembering and, crucially, interrogating the colonial past (Gandhi, 1998).

Thus, as Livingstone, Shapin, and others in STS have aimed to “place the view from nowhere” (Shapin, 1998) in science, Legal Geography, similarly, has made it its objective to place “the view from nowhere”, or universalising discourses, in law. To explore not only “the what” but “the where” of law; the way the where intersects and co-constitutes the what—the artefacts, doctrines, techniques, reasoning, epistemology, and actual doing—of law. As the leading scholars, in some ways chief architects, of this field (Nicholas Blomley, David Delaney, Irus Braverman, Alexandre (Sandy) Kedar) have summarised its objectives and questions succinctly:

Legal geography is a stream of scholarship that takes the interconnections between law and spatiality, and especially their reciprocal construction, as core objects of inquiry. Legal geographers contend that in the world of lived social relations and experience, aspects of the social that are analytically identified as either legal or spatial are conjoined and co-constituted...law is always “worlded” in some way. Likewise, every bit of social space, lived places, and landscapes are inscribed with legal significance...These meanings are open to interpretation and may become involved in a range of legal practices. (Blomley, et al., 2013, p.1)

SUMMARY: LEGAL GEOGRAPHY, GEO-LEGAL TECHNIQUES, AND GEOGRAPHIES OF POWER

Although Legal Geography is eclectic and not a distinct discipline with strict, demarcative lines of scholarship, it has, nevertheless, some broad, thematic, analytic, and conceptual questions or foci. Firstly, an interest in how legal reasoning, techniques, doctrines, and regulatory practices use spatial concepts to do law and to construct and govern social, political space (what Holder and Harrison (2002) have referred to as Geography-In-Law); and, secondly, an interest in how space—or, cultural and political geography—is performative and has the capacity to affect and co-constitute the practice, translation, and form of law and regulatory governance (what Holder and Harrison (2002) have referred to as Law-in-Geography). What unites these two foci is an appreciation of the performativity of geo-legal and regulatory spaces, concepts, imaginaries, and techniques. But more than that: the interest is on exploring the intersections of law and social relations or production of power through spatial discourses, techniques, and imaginaries in law and an exploration of political / cultural geographies through which law-making and law-doing takes place. It thus not about examining spatiality for its own sake, but to, in the case of law and colonialism, to unpack how spatiality is intimately linked to and intertwined with wider

sociocultural processes of power and contestations over the political meaning and ownership social spaces and activities that take place within them.

CONCLUSION

The thesis will examine the history of the socio-technical construction, contestation, and translation of HIV / AIDS in Africa. It will also unpack the multilateral regime that grew in the late 1990s and early 2000s to provide affordable access to generic HIV / AIDS drugs to the continent. Furthermore, it will explore the history of the travel of patent law to Africa and situate contestations about the TRIPS agreement within this history. The focus will be on the geo-politics of these issues, particularly as they relate to the colonial encounter and its lingering effects on the postcolonial relationships of Africa with Euro-American systems of knowledge and legal and scientific practices. Accordingly, the issue of how political and cultural geography informed the epistemic and geopolitical aspects of these practices will feature prominently in the thesis.

The aim of this chapter has been to address some of the theoretical issues around the research questions that will be explored, specifically with respect to the concept of Post-Coloniality and the ways that political/ cultural geography (or just “space”) influences scientific epistemology and practice. Post-coloniality was defined as a form of critique; a way to interrogate the lingering, institutional and structural effects of the colonial experience on the systems of thought, geopolitical relationships, and technical and regulatory regimes that order and discipline the sociocultural life and space of many in the Global South. Political/cultural geography was described as a factor in scientific and legal practice and the ways that both disciplines have dealt with it as an epistemic and sociocultural problem (according to Science and Technology Studies and Legal Geography scholarship) was explored. The conclusion was that space mattered not only as a feature of thought within legal and science epistemology, but, also, as a wider institutional and sociocultural “actant”—that is, a performative and co-constitutive tool used to legitimise (or “black-box”)

epistemic claims and, in the case of law and regulatory practice, govern and order political and social life.

**CHAPTER TWO: THE COLONIAL CONTEXT OF EUROPEAN SCIENCE
IN AFRICA**

This chapter begins to describe the travels and readings of scientific knowledge that surrounded HIV / AIDS in Africa. The next chapter will deal with HIV / AIDS specifically. This chapter will concentrate on the colonial context, the period when many of the racialised discourses and imaginaries about Africans that will reappear in the 1980s emerged. Thus, in this chapter, the history of European science and medicine in Africa is explored within the colonial context. Further, the relationship between medical/scientific knowledge and the governance of colonial states is examined and; relatedly, the connection between this knowledge and the construction of racialised discourses about Africans is unpacked. This is situated within a wider, theoretical discussion about the relationship between political geography (or social constructions of space) and epistemic practice; that is, the way that the political and cultural geography of African colonies influenced the construction and translation of European, scientific knowledge. It is of two parts. It begins by providing a brief literature review on colonial science from the perspective of Post-colonial Studies. Then it narrows down on the subject matter of Tropical Medicine and its use in the colonisation process. After that, in part two, the intersections of colonial/tropical medicine with race and scientific racism is analysed.

The chapter argues that Tropical Medicine was not only a body of knowledge, but also a tool of colonisation that was deeply intertwined with racial discourses. These discourses pervaded so much of its practice that it became an “actant” — an institutional factor that coloured epistemic practices and the way that Africans were studied and European, scientific ideas travelled to, and were read and translated in, Africa.

PART ONE: POST-COLONIAL STUDIES AND THE GEO-POLITICS OF TECHNO-SCIENCE

Although studies of colonial science have long roots in Post-Colonial Studies (Frantz Fanon’s essay on ‘Medicine and Colonialism’ of 1959 being a case and starting point), in recent years, scholarship in this area has grown impressively. What has tended to unite this scholarship,

thematically, has been an objective to show, as Headricks puts it, how “Western scientific knowledge... [was] co-constituted with colonialism”; how, to borrow a phrase from Headrick, techno-scientific artefacts operated as “tools of empire” (Headrick, 1981). Attached to this has been another, broader and more significant aim: to question the “meta” or “grand narrative” (Lyotard, 1984) of imperialism and colonialism that held science to be a gift of civility and modernity to colonised populations: the idea that colonialism/imperialism was a “Civilising Mission”, a “White-man’s Burden”, that had to be endured and suffered by European civilization to bring modernity to barbaric, backward peoples such as those in Africa (Headrick, 1981).

One area that has received much attention has been Tropical Medicine— or “Colonial Medicine”⁹. Critical and post-colonial scholarship in this area has, generally, concluded, among other things, that: firstly, Colonial/Tropical Medicine—and other disciplines associated to it—was another “tool of empire” and technique of colonial statecraft; secondly, that it was conducted through a transnational network of epistemic communities; and, thirdly, that the idea of difference, especially racism, was central to how it treated, studied, conceptualised, and problematised colonial/tropical geographies and peoples. These features of Tropical Medicine will now be explored in a bit more detail.

COLONIAL/TROPICAL MEDICINE: A “TOOL OF EMPIRE” AND COLONIAL STATECRAFT

Since its modern emergence in the 19th century, Colonial/Tropical Medicine was part of the transnational political-economy of colonial government . It was, therefore, not merely a body of scientific or technical knowledge, but in part a political project: a technique of colonial governance. Like colonial geology and cartography (especially land-surveyance and city planning) Colonial/Tropical Medicine was a political project; a systematic and coordinated programme to

⁹ see: Arnold, 1996; Harrison, 1996; Kiple & Ornelas, 1996; Peard, 1999; Crozier, 2007; Power, 2011; Neill, 2012; Bala, 2012.

build a body of knowledge about colonial geographies and populations so as to better govern and manage them for colonial aims¹⁰. Although those engaged in the discipline did not necessarily perceive their involvement, and the technical knowledge that they were producing and studying, as “political” or disengaged from the pursuit of scientific inquiry, by embedding themselves with and providing technical advice to colonial administrations and armies, and generally being part of the colonial project and system, separating their “technical” activities from their political dimensions or context has been shown to be problematic; as Frantz Fanon’s work on ‘Medicine and Colonialism’, particularly the work of physicians, in the context of the French colonial state of Algeria has shown and as other works, cited below, on colonial, regulatory epidemiology will illustrate).

Therefore, Tropical Medicine was not just about medicine, *per se*. It was part of the long-list of technical fields of science and engineering that made colonial projects technically feasible. Although many disciplines were involved, some fields were more prominent than others. The prominent fields were clinical-medicine (the work of physicians and medical professionals generally); regulatory epidemiology (the work of public-health practitioners); microbiology, parasitology, and entomology (the work of laboratory institutes, micro-epidemiologists, and laboratory technicians and manufacturers); and pharmaceutical science (the work of industrial laboratories, pharmaceutical/chemical engineers, pharmacists, etc.) (Power, 2011). In exploring the tense and problematic relationship between the tropical medicine community and their involvement in the operations of the colonial state, Neill, in her recent, detailed book on and investigation of the subject has concluded that:

The origin of tropical medicine lay not just in scientific discoveries that revealed the relationship between microbes and human illness more clearly but also in the expansion

¹⁰ See: Monmonier, 1995; Parry & Perkins, 2000; Cosgrove, 2006; Akerman, 2009; Crampton, 2010; Wood, 2010; Sullivan, 2011; Vanthemsche, 2012.

of colonial empires in the last quarter of the 19th century...The task of the medical establishment in the colonies was to make territories safe for Europeans, and as military and public carrying out the will of their governments, scientists and doctors were understandably predisposed to favour state-sponsored activities that extend European power in the colonies. (Neill, 2012, p.205)

COLONIAL/TROPICAL MEDICINE AS A TRANSNATIONAL EPISTEMIC COMMUNITY

As noted in the previous chapter, examinations of the flow of techno science must also, *inter alia*, take account of the global and glocal nature of its circulations; particularly as it relates to epistemic communities, material artefacts, and the technical knowledge that they produce (“Thing-Knowledge”) and the material sites where scientific knowledge is constructed and given stability and legitimacy for global travel and consumption (“Truth Spots”). Tropical Medicine is a good example: The work of colonial/tropical medicine practitioners took place across multiple geographies and networks. It was part of a transnational circuit of material and epistemic exchange between the colonies and the Metropole—that is, as part of the messy intersection and encounter between periphery and centre. As a community of practitioners, they formed what could be called, recognisably, a “policy-network” or “epistemic community”; that is to say, a network of professionals with authoritative claims of policy-relevant expertise (Vanthemsche, 2012).

As a transnational network, they collaborated on joint projects; and they exchanged technical artefacts, specimens, personnel, and techniques. One way that exchange and collaboration took place was through international conferences and journals. Conferences provided space for them to meet; plan collaborative projects; standardized nomenclature, techniques, and artefacts (e.g. Thing-Knowledge); and, generally, create a social and professional community. Specialised journals, as in all other professional and academic fields, was a means of keeping the transnational community up-to-date with developments in their fields; and keeping

them current with emerging technical problems, solutions, techniques, and/or areas in need of further research. That is to say, they not only reported and disseminated knowledge; they posed questions that were open to investigation: in other words, they problematized Others (as we shall also see with respect to Project SIDA in chapter three). Deborah Neill has made the following comments on this subject matter:

They [tropical medicine practitioners] were also members of an interest group shaped by the unique culture of the late 19th century and early 20th centuries. This culture rested on the principle of internationalism...Their connections helped them form an “epistemic community” that established their wider societal and professional credibility as they built collective expertise, opportunities, and advancement for themselves and their discipline. (Neill, 2012, p. 206)

COLONIAL MEDICINE AND TRUTH-SPOTS

It was mentioned above that one of the main practitioners of Colonial/Tropical Medicine were micro-biologists and virologists. One of the important ways they provided technical support and advice to colonial administrations was through the construction of laboratories. As Margaret Lock and Vinh-Kim Nguyen have argued, the transnational travel of colonial, techno-science was facilitated by Truth-Spots; they were hubs that permitted European knowledge to be moved to and translated in the colonies; they provided a technique to bracket the problem of geography and colonial difference and to negotiate what Gieryn has phrased the “Epistemics of Place” and “the paradox of place and truth” (Gieryn, 2006, p.113). They became spaces, in a real Latourian sense, to build “immutable mobiles” and physically bring, materialise, and place European knowledge in the colonies. However, as will be argued below, this bracketing had some limitations. As Lock and Nguyen have argued, and as the laboratory built by Project SIDA in Zaire will affirm in the following chapter, these laboratories were pivotal in circulating European knowledge globally,

especially to the colonies, and connecting the colonies to the Metropole (in a epistemic and institutional sense) :

A global network of Pasteur Institutes... trained generations of key colonial officials...Along with the Institute Pasteur in French Indochina, Tunisia, and Senegal, the Rockefeller Institute in New York, the Wellcome Trust in London, and the Fundacion Oswaldo Cruz in Brazil established research laboratories that together girdled the earth. In the capitals of the colonial powers, training institutes such as the London School of Hygiene and Tropical Medicine and the Antwerp Institute of Tropical Medicine, the Royal Tropical Medicine Institute in the Netherlands produced the next generation of global researchers...This was the first step towards a global epidemiology that would later become established in association with the international institutions that began to collect and compare health statistics across nations. (Lock & Nguyen, 2010, p.1683)

As will be shown in chapter three, these laboratories, in time, became very important after “de-colonisation”. They continued to operate and have a physical foothold in many post-colonial countries. And, as we shall see, many of them played a considerable role in the establishment of Project SIDA in the 1980s. For example, after the formal dissolution of colonial administrations in Africa in the 1960s and 1970s, Euro-American techno-scientific interventions and research in Africa continued. For instance, with the growth of serological-epidemiology and biochemistry in the 1950s-1970s, which made the isolation of viruses mundane laboratory work in Europe and America, African geographies and bodies became the focus of, and hunting ground for, many Euro-American “virus hunters” (McCormick, et al., 1999). Like their colonial counterparts in the 19th and early 20th century, these hunters went to Africa to search for “exotic”, tropical diseases and pathogens —a good example being the Belgian Institute of Tropical Medicine (ITM)’s and its search for the “Ebola Virus” in Zaire in the 1970s (McCormick, et al., 1999; Piot, 2012).

In the 1970s, Zaire and Sudan experienced outbreaks of what came to be known as Ebola¹¹. Given its high death toll, infectiousness, and dreadful symptoms (e.g., bleeding from every orifice of the body), the outbreak generated much panic, not just in Africa, but in Europe and America¹². The response to the outbreak was global. Through the World Health Organisation, an epidemiological, outbreak-response team, composed of many scientists¹³ and institutions¹⁴ that would work on Project SIDA in the 1980s, were sent to Zaire and Sudan. These scientists and institutions collaborated with the Zairian/Sudanese governments and received much assistance from local, medical and scientific communities. While there, they established a transnational, Ebola research-programme and set-up laboratories (especially in Zaire) to study the disease and isolate its causal agent. After many years and research collaboration between Euro-American scientists, the causal agent was isolated in the late 1970s (again, by the same scientist and institutions that would return in the 1980s in the form of Project SIDA).

The Ebola project would become a constant referent in Project SIDA's work. The project was one of the first, major, epidemiological interventions of Euro-American states into Africa after de-colonisation. However, as shall see also with Project SIDA, the links between colonial and post-colonial experience were many. As with Project SIDA, colonial traces came back to colour much of the work of the project and the way that its knowledge was received and contested in Africa.

These issues will be examined in much more detail in the next chapter. But, for now, it is enough to highlight importance of laboratories as Truth-Spots within the colonial context; that is, their significance as places that standardised and routinized knowledge practices and offered a presumption of epistemic equivalence and validity for their global travel outside of the sites of

11 The clinical presentation of Ebola is widespread bleeding into many organs and the symptoms include sudden onset of high fever, myalgia, diarrhea, headache, fatigue, and abdominal pain; a rash, sore throat, and conjunctivitis and etc. (Venes, 2009)

12 See: World Health Organization, 1978; Brown, 1995; Oldstone, 2010.

13 For example, Dr. Peter Piot, Joseph McCormick, Thomas Quinn.

14 For example, The London School of Hygiene and Tropical Medicine, the Belgian Institute of Tropical Medicine (ITM), Centres for Disease Control and Prevention (CDC).

their construction. In addition, as Livingstone and Shapin have argued, these Truth-Spots could only do so much bracketing. The colonies were imbued and permeated with notions of difference. Escaping it was very difficult because the colonies were imagined and constructed as a geography of difference. Some of the ways that this othering took place and this discourse of difference manifested itself will be described.

PART TWO: COLONIAL/TROPICAL MEDICINE AND RACIAL/CULTURAL DIFFERENCE

Although Colonial/Tropical Medicine brought together disparate groups and disciplines, the idea of difference was a constant theme in the way these disciplines treated and thought about and studied the Colonies/Tropics and their peoples. For sake of simplicity, this theme has been schematically broken down into four interrelated parts, mainly: (1) Geo-physical, climatic difference: (2) Racial and biological difference: (3) sociocultural difference: and (4) Extrapolative and translative difference¹⁵. By way of future guidance, it is worth remembering these themes as they will reappear in the next chapter when the socio-history of HIV/ AIDS in Africa will be examined and African contestations to it will be unpacked.

As climatic and geo-physical environments, the Colonies or Tropics were studied and represented (especially, in the disciplines of Entomology, Parasitology, and Microbiology) as foreign and Other; as having pathogens—e.g., insects, parasites, viruses, bacteria, and etc. — that were unknown and more lethal than those in Europe.

15 [Some] characteristics of this early tropical medicine seem to stand out. The first was a sense of "otherness" attached by Europeans to warm countries and tropical places. This difference was reflected in accounts of plants, animals, climate and topography, and in descriptions of indigenous societies and cultures, but (perhaps because physicians were significant and scientifically informed observers) it was particularized through the discussion of disease...to understand the "tropics" as a conceptual, and not just physical, space...what was it that justified the notion of "the tropics"?...calling a part of the globe "the tropics"...was a Western way of defining something culturally and politically alien, as well as environmentally distinctive, from Europe... (Arnold, 1996)

For many European scientists that went to the Tropics/Colonies, it was a fertile environment for “virus hunting”, a space to look for exotic parasites, viruses, and pathogens. However, for colonial administrators and military planners, the climatic and pathogenic difference of the Tropics/Colonies was a huge risk to be managed; much of the casualties and fatalities of European military operations in the colonies did not come about from direct military encounters, but from the climate and pathogens of the Tropics: foreign parasites and diseases that lurked there. Accordingly, much of colonial, military medicine and pharmaceutical engineering focused on this geo-physical and climatic difference, particularly, in finding pharmacotherapeutic (e.g. malaria prophylaxis, antinematodes, antiprotozoals, etc.) and epidemiological techniques (mosquito nets, indoor and outdoor spraying, public hygiene programmes) to manage or eliminate the pathogenic risks posed by tropical environments and their parasitic and microbiological agents.

As subjects of scientific inquiry and classification, however, colonised peoples were studied and classified as Other; through ideas of racial and biological difference. This was true not only in medicine itself (as Frantz Fanon’s essay on ‘Medicine and Colonialism’ of 1959 argued powerfully), but, in all the other disciplines that provided the conceptual tools and racial typologies that informed colonial medicine. By which it is meant the collection of disciplines that came to constitute what is commonly called Scientific Racism: mainly, the discipline of Eugenics (or “racial hygiene”); Physical/Racial Anthropology (the study and classification of human populations according to racial typologies); and, Phrenology and Anthropometry (the study and classification of populations into sociocultural and racial typologies according to the properties of their skull and/or other physiological and psychometric measures)¹⁶. Medicine floated across and borrowed from these and other disciplines. It was part of the archipelago and army of scientific crafts that made the colonies and its peoples a “problem” to be managed and studied for colonial projects.

¹⁶ For a detail study of these disciplines and relationship to medicine, see: Bank, 1996; Crozier, 2007; Power, 2011; Neill, 2012.

FROM CENTRE TO PERIPHERY:
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SCIENCE

Many of these disciplines had their roots in Europe; their targets were mainly those of lower socio-economic status, women, and groups generally perceived as being sexually and/or criminally deviant: in other words, all groups and identities classified, for whatever reason, as Other and not fitting within hegemonic notions and imaginaries of normalcy and community. However, when applied to, and translated in, colonial spaces notions of racial difference became central. Race coloured and tainted everything. Recent scholarship on this subject will now, briefly, be described.

For example, in his study of Phrenology in South Africa, Andrew Bank (much like how Livingstone has written about colonial New Zealand and the American South in the 19th century¹⁷) has written about how the political and cultural geography of colonial South Africa informed scientific readings and contestations about Phrenology and race theory. Bank also highlights the importance of material artefacts (human skulls and specimens) within those translations (Bank, 1996, p.1). And, again, on South Africa: Didier Fassin and Helen Schneider have commented on the links between race and regulatory epidemiology in colonial and apartheid South Africa, noting how:

Epidemics [were] often been used to enforce racial segregation...[for example] The bubonic plague of 1900 in Capetown was used to justify the mass removal of Africans

¹⁷ See, for example, Livingstone's work on the translation of Darwin's theory of evolution in colonial New Zealand and the American South in 19th century. (Livingstone, 2004, p.139)

from their homes to the first “native locations” under the first segregationist law, passed in 1883 and called, significantly, the Public Health Act (Schneider, 2003, p.422).

Myron Echenger has added to Fassin and Schneider’s work with much more detail. She has described the many ways that public health regulation in colonial, apartheid South Africa was often infused with racialised, regulatory violence that targeted non-white South Africans. She has emphasised how this violence was justified through particular discourses and representations of Africans as unhygienic, unsanitary peoples that carried pathogens from which the white, South African population needed protection through segregation laws. Echenger goes as far as to argue that scientific discourses that othered Africans played an important role in constructing the apartheid state and providing an other against whom European settlers could build a communal identity (Echenberg, 2006, pp. 89-96).

In her analysis of colonial Senegal, Echenger finds similar trends as in South Africa. She notes how the intermingling of science and colonialism made it difficult for Africans to separate the two. For Africans, she argues, scientific knowledge was just another part of the colonization act—a technique to subordinate local knowledge and practices to the grand narrative of the civilising mission. And, according to Echenger, their suspicions were well grounded; scientific discourses and techniques around the French response to the bubonic plague in Senegal in the 19th and early 20th century were deeply connected to the colonial state's treatment of Africans as Other and campaigns by European populations in the colony to separate and segregate themselves, by force of law and regulation, from the “natives” who they represented, by virtue of scientific discourses, as unsanitary and uncivilised and, consequently, as carriers of disease. Because of this, health regulations and epistemological campaigns by the colonial state (especially quarantines, cordons sanitaires, and compulsory vaccinations and other pharmacotherapeutic interventions) were perceived by “the natives” as a species of political and “biological warfare” (a theme that re-emerged in the 1980s with respect to HIV / AIDS). As with South Africa, the "the natives" of

Senegal resisted health campaigns and dispose of their dead secretly and out of the reach (culturally and legally) of the colonial state and its scientific practices (Echenberg, 2006, p.94).

Similarly, Chloe Campbell, in her fascinating work on the local translation of eugenic thought and practice in colonial Kenya, has underlined the centrality of race and difference. She notes that Eugenics in Europe, initially, did not focus on race, but, argues that when it was imported and translated in colonial Kenya, race became a thematic issue. Eugenics became another “tool of empire”; a way to legitimize the colonization project by treating and representing the colonised “natives” as less involved, mentally deficient, and lacking in adequate intellect and self-government to be considered equal within the universalizing discourses and representations of European science and enlightenment. In this way, the political geography of the colonial state deeply influenced the translation of Eugenics as it travelled from Europe to Kenya. Eugenic ideas provided an explanation and justification for the colonisation of African peoples. She writes:

What is remarkable about the eugenics movement in Kenya is the strength of its conclusions about race and intelligence, and the length with which British eugenic principles could be used to construct such extreme scientific racism...Race and class were easily conflated in the interaction between Kenya and British eugenics....(Campbell, 2007, pp.1-2)

The fields of physical and cultural anthropology reinforced these racialized assumptions of Africans as other and inferior. As Rachel Caspari, in her study of race and Euro-American Physical Anthropology in the 19th and early 20th century, has argued, the question of cultural and racial difference was at the core of the discipline of anthropology. Explaining and justifying the perceived backwardness (in a cultural and biological sense) of colonised “natives” preoccupied much of the discipline. And, categorising these backward peoples, against a European referent of civility, featured in much of the foundational assumptions of the discipline. Some (Diana Lewis being a prime example) have gone as far as to situate the very emergence of anthropology as a discipline

with the colonial encounter and the perceived need it generated to classify and study colonise populations and their cultures. In some ways, anthropology was not so much, therefore, a study or science of human cultures and populations, but, rather, a diagnostics and systematic classification of the biological and cultural pathologies and deficiencies of colonised peoples when measured against a fit and mature, superior, European civilization, race, and body politic (Lewis, 1973, p.582).

These ideas of difference were so deeply infused in the scientific and medical disciplines that studied African populations and cultures that it became difficult to apply the universalizing claims of science without qualification or translation. Accordingly, as Philippa Levine, has argued, the colonies became a distinct epistemic space that could not be separated from the general, racialized constructions and imaginaries of natives that came with colonisation. To illustrate this point, she notes the example of venereal diseases. The physical environment, and political and cultural geography, of the tropics/colonies became actants in their own right; they were not side issues or background noise, but integral factors in the construction and reading of medical and scientific knowledge. As Chloe Campbell showed with respect to eugenics in Kenya, and Fassin and Echenger illustrated with the case of South Africa and Senegal with respect to regulatory epidemiology, geography mattered immensely in the reading and consumption of scientific knowledge: a point Levine illustrates well in her analysis of the diagnosis of venereal diseases in the colonies:

...the reliance on visual observation suggested a compelling link between [venereal diseases] and the tropics. Tropical climates were seen as likelier breeding grounds for infection and contagion, and they were regarded, too, as inflaming the passion and negating caution and reason...western doctors observing seemingly syphilitic symptoms in the young frequently concluded that juvenile sexuality was uncontrolled in colonial populations. These were vital elements, of course, in the reading of [venereal diseases] as

a measure of promiscuity, as of the reading of the tropics as less civilized and less seemly.
(Levine, 2003, p.65)

CONCLUSION

The emergence of tropical medicine was intimately tied to the colonial encounter and the racialized, political and cultural space and social relations that it constructed. This space was so significant, and the issues of race pervaded and ordered so much of its social relations, that scientific and medical practices in the colonies became subsumed by it or at least considerably influenced by its basic assumptions. So much so that the universalist claims of European science and medicine (the very aims of the civilising mission that purportedly underpinned and justified the colonial project) became very local and subject to geographic differentiation and political readings. Because of this, the colonised “natives” did not distinguish, or found it hard to disentangle, the “apolitical” and or “mere technical” dimensions of scientific knowledge from its colonial and "political" form— especially as it related to public health. They, thus, contested and resisted the travel of European, colonial, scientific knowledge and practices in various and subtle ways.

Tropical/ colonial medicine and science can therefore be considered as another “tool of empire”; a technical field that facilitated the colonisation process and, along the way, was complicit in practices and discourses that treated and represented Africans as Other and, importantly, as less culturally evolved and not deserving of equal respect. As Levine concludes in her examination of Tropical Medicine and the study and treatment of venereal diseases in the colonies:

...Colonial Medicine was a central mechanism in the imposition of colonial power...The pursuit of science and medicine, the final word in modern rationality, contrasted forcefully with “colonial backwardness”, the reluctance to embrace the techniques of values of western medicine...Medicine played a central role in imperial expansion, an expression of

the very project of modernity. Doctors brought the benefits of civilization to the ungrateful and the immoral. (Levine, 2003, p.9)

Despite this history, the connection between this colonial past and African contestations of medical knowledge about HIV / AIDS is often, with noted exceptions, not adequately addressed in much scholarship about HIV / AIDS in Africa. African contestations are examined as somehow taking place within a historical vacuum; as if the colonial encounter did not leave its traces and marks; as if the travel and movement of scientific knowledge about HIV / AIDS was smooth across different political and cultural geographies; as if the postcolonial relationships of African states with European systems of knowledge took place through a substantive, structural rupture with the colonial past. The 1980s, 1990s, and early 2000s (the period when major contestations over HIV / AIDS took place) are treated as distinct, social and geopolitical order, divorced from the colonial past and its lingering effects. In the next chapter, however, the linkages between African experiences with colonial science and post-colonial contestations over HIV / AIDS are explored through an examination of Project SIDA: the first major European and American research programme on HIV / AIDS in Africa.

**CHAPTER THREE: PROJECT SIDA, HIV/AIDS RESEARCH IN
AFRICA AND ITS CONTESTATIONS AND READINGS IN A POST-
COLONIAL CONTEXT**

This chapter examines the connections between Africa's encounter with colonial science and its post-colonial engagements with, and readings of, scientific knowledge about HIV / AIDS in the 1980s and 1990s. It is especially interested in how the racialised imaginaries and discourses about Africa, constructed in colonial period, informed scientific practices about, and the movement and African contestations of, HIV/ AIDS in Africa.

On a theoretical level, the chapter draws from Science and Technology Studies and Post-Colonial Studies scholarship to examine issues around the epistemics of place. It uses Project SIDA (the first major European and American research programme on HIV / AIDS in Africa) as a case study and investigates how particular cultural and political geographies, in this case African states, posed epistemic and sociocultural problems about the universalist discourses of science, its global travel, and representation as placeless. The chapter unpacks how tensions and discourses around race and colonialism mediated the construction and translation of scientific knowledge and describes how these tensions were suspended through different scientific techniques (through Truth-Spots and Thing-Knowledge, laboratories and HIV-Blood screenings kits, respectively).

The chapter is divided into three parts, broken down into five sections. The first and second parts focus on the transnational movement of HIV/AIDS, as an epistemic and material artefact, from the United States and Europe to Haiti and Africa. They examine how Euro-American scientists confronted, and negotiated tensions around and accusations of, racism as they, and HIV / AIDS, travelled to Africa. African contestations and readings of this travel are examined, and the connections between these readings and the colonial past is unpacked. The third part deals with the establishment of sero-epidemiological programmes in Africa in the 1980s and 1990s; the significant role that HIV screening kits played in this process; and connects the programmes and kit to the formation of a permanent, sero-epidemiological and surveillance system and network at the United Nations in the form of the Joint United Nations Programme on HIV and AIDS (UNAIDS).

The chapter argues that the travel of AIDS, as an epistemic project, from the United States and Europe to Africa was subject to multiple geographies of reading. These readings were the result of the “heavy”, laboratory- intensive definition of AIDS in the early 1980s and the effects of the racialised discourses about Africans left in place by colonial science. It argues that these readings, and African contestations of Euro-American knowledge, were only circumvented by the availability of the first HIV blood-screening kits, which translated HIV / AIDS into “Thing-Knowledge”; mobile artefacts that could travel more easily and with less of a concern for place.

Before continuing, some comments about references: because Project SIDA has not received much attention in academic scholarship, there is accordingly a dearth of references to it. Most of the information used in this chapter, especially in sections one to three, are based mostly on public transcripts of interviews, conducted by the American National Institute of Health (as part of its “Oral Histories Project of HIV/AIDS”), and on the recently-published biographies and commentaries of some of participants in the Project—who, also, make limited reference to the Project.

PART ONE: MULTI-SITED NARRATIVES OF PROJECT SIDA AND HAITIAN RESISTANCE TO HIV/AIDS RESEARCH

It was previously noted that because the movements of techno-scientific knowledge and artefacts are often global, “multi-sited narratives” (to borrow Warwick Andersons' phrase) or accounts are needed. And, as Livingstone and Shapin have argued, these accounts should also aim to place “the view from nowhere”, the universalists discourses of “placeless knowledge”, within particular “micro geographies of production” and, indeed, consumption and translation. Gieryn has, similarly, called for consideration for issues around “the epistemics of place”; for the “paradox between place and truth”, for the way knowledge is packaged for global and stable travel.

Accordingly, this section begins to set out the multi-sited narrative of HIV/ AIDS. It traces the travel of HIV/ AIDS, as a set of scientific practices, from the United States to Africa by following the scientific community that carried it from place to place. As they stopped in Haiti before reaching Africa, and as what they did and confronted there had relevance for what took place in Africa, Haiti will first be examined.

The section will start by tracing the American, institutional context within which Haiti and Africa came to be epistemic interests for Euro-American scientists (mainly, debates about the etiology of AIDS within the United States Public Health Service). It then looks at the American mission to Haiti. The way that Haiti's colonial past, especially the racialised discourses that in left in place, influenced the travel and reading AIDS in Haiti is then described; and the section finishes by analysing the significance of truth spots/laboratories in the travel and epistemic legitimisation of AIDS.

THE AMERICAN CONTEXT OF HIV/AIDS RESEARCH AND DEBATES ABOUT THE MEANING AND DEFINITION OF HIV/AIDS IN THE EARLY 1980S

The technical construction of HIV / AIDS was largely the work of the American Public Health Service (PHS or simply the "Service"). Three of its agencies were prominent in this process: the Centre for Disease Control and Prevention (the CDC), the National Institutes of Health (NIH), and the Food and Drugs Administration (FDA). What came to be AIDS and HIV grew from technical collaborations, contestations, and negotiations between these agencies and, later, the reception and readings of their technical claims by the wider, American public; noticeably, legislators, health campaigners particularly from the gay community), patient associations (noticeably the haemophilia patient association), religious groups, the medical establishment, etc.

The first reported cases of AIDS were published in on 5, June, 1981 by the CDC through what are called "epidemiological case reports"; official reports published by the agency whenever,

among other things, it considers a health event or trend to be relevant, and/or, of such a significant nature to deserve consideration by the medical community, at large, and other agencies of the Public Health Service, specifically (Centers for Disease Control and Prevention, et al., June 5, 1981)). For much of 1981 and 1982, the CDC's case reports focused, overwhelmingly, on the gay community and those who injected illegal drugs (especially, heroin) (Centers for Disease Control and Prevention, 1982). The reports caused much anxiety and their members, understandably, feared the incredibly high death toll that was reported from AIDS (or “GRID”, the Gay-Related Immune Deficiency Syndrome, as it was then designated). They were particularly concerned about the apparent lack of attention being paid by the Public Health Service; especially when it came to allocating adequate resources towards finding a treatment for GRID. Besides this community, however, and radical religious groups that represented AIDS as an appropriate punishment for those they represented as sexually deviant, AIDS did not receive much national attention, let alone international reaction outside of America and Europe. Within the PHS, it was an esoteric, niche research and policy issue for a small network of epidemiologists and virologists clustered at the CDC (National Academy of Sciences; Committee to Study HIV Transmission Through Blood and Blood Products, 1995).

So, for example, within a year of being reported, AIDS generated enough interest within the CDC, external research-institutes and laboratories, and a small cluster of investigators in other agencies of the Department of Health—principally at the National Institute of Health—that, in 1982, an ad hoc, epidemiological task force was established within the CDC; this task force met irregularly, had very limited institutional and technical support, and was composed of, mostly, volunteers with expertise and interest in venereal and infectious epidemiology, including specialists on homosexual venereology; accordingly, most were from the CDC's Venereal Disease Control Division (National Academy of Sciences; Committee to Study HIV Transmission Through Blood and Blood Products, 1995). This composition, this speciality and focus in venereology, played a

significant role in framing the discourses through which AIDS was initially problematized; that is, the way that AIDS came to be viewed as a problem of, what the CDC phrased, “[risky] sexual practices for venereal diseases...and life-styles...similar to those of homosexuals (Centers for Disease Control and Prevention, 1982).

Despite the focus on the gay community, it is worth noting, however, that even in these early years, the CDC’s case-reports were not only written about homosexuals. Case-reports on heterosexuals were already published by 1982. They focused on those of low socio-economic status; those that injected “street drugs”; those who engaged in “street prostitution”; and those of the growing, and increasingly racialised, prison population (National Academy of Sciences; Committee to Study HIV Transmission Through Blood and Blood Products, 1995). Thus, in many ways, the cultural geography of the case-reports focused on sociocultural and economic groups that were represented as Other; on groups and spaces situated in or near the margins and peripheries of dominant, hegemonic, American discourses of normalcy (National Academy of Sciences; Committee to Study HIV Transmission Through Blood and Blood Products, 1995).

On 16, July, 1982, however, the CDC published case-reports that went beyond those cultural identities and, as a consequence, opened a space for case-reports and regulatory epidemiology to be entangled in the epistemic practices of law. In July, the CDC published case-reports that suggested that GRID was not only a pathology of deviant groups, but a risk to the “general” population; the language of risk spread to everybody, not, just those considered as Other. In that case-report, it claimed that GRID was caused by a novel and unknown pathogen already present in blood-products—that is, licensed products supervised by the FDA (Ehrenkranz, et al., July 16, 1982). The product in question was Antihemophilic Factor Concentrates (AHF): a class of blood-products used to treat haemophiliacs (Ehrenkranz, et al., July 16, 1982). According to the CDC, the entire American blood-supply was, already or potentially, responsible for the deaths of an unknown number of patients and consumers of licensed products (Tansey & Christie, 1999).

On 16 and 27, July 1982, an ad hoc TAC was formed within the Department of Health to review the CDC's case-reports and attempt to respond to some of the questions that they posed. Representatives from federal agencies, such the CDC, FDA, and National Institutes of Health attended; and a number of "public interest representatives", such as the National Gay Task Force and the National Hemophilia Foundation, were also invited. The reception of the CDC's case-reports at this meeting was, generally, hostile (National Academy of Sciences; Committee to Study HIV Transmission Through Blood and Blood Products, 1995).

At the July meeting, FDA representatives challenged the CDC's use of case-reports to construct and establish novel scientific claims (Curran, 1998). Whereas the CDC wanted to recruit case-reports to support its claim that AIDS was new pathology caused by new a pathogen, the FDA argued that cases-reports were merely a regulatory technique of risk management. Instead of indicating a new pathology and pathogen, the CDC was told: its case-reports only shed light on known adverse drug-reactions. In addition, the FDA representatives openly challenged the CDC as to whether GRID/AIDS was, in fact, a new pathology (National Academy of Sciences; Committee to Study HIV Transmission Through Blood and Blood Products, 1995).

Furthermore, the CDC's expertise was questioned. That is, the FDA argued that the CDC lacked adequate expertise and credibility in the field pharmaceutical and biochemical engineering to make and evaluate the epistemic and etiological claims it was making. As is often the case when there is uncertainty in regulatory science, a contestation emerged between the CDC and FDA over which agency and expert community had the credibility, authority, appropriate expertise, institutional/political legitimacy, to decide on question of risks and epistemic uncertainty. Dr. James W. Curran (the divisional-chief of the CDC's Venereal Disease Control Division, co-author of case-reports, and one of presenters from the CDC at the meeting) has commented in an interview on the extent to which the CDC's credibility was questioned during this period:

Bruce Evatt [Director of the CDC's Division of Haematology] and, occasionally, I would go to blood-banking meetings [at BPAC]. We would give our presentation, and then we would leave. Then the blood bankers would talk to each other about how the suggestion that the blood supply might be infected could not possibly be true. They would bring in NHLBI [another agency within the Department of Health] people, and they would talk to them, and, of course, they did not believe it either. (Curran, 1998)

An added factor was the participation of National Gay Task Force in the deliberations. The Task Force expressed deep reservations about four recommendations that the CDC proposed for the FDA to apply. Mainly, the call, with much support from Medical and Scientific Advisory Council (MASAC) of National Haemophilia Foundation, for the FDA to: firstly, recall batches of AHFs found or suspected to have come from blood donated by "high-risk" groups (i.e., the gay community): secondly, request the homosexual community to "self-defer" and not donate blood; thirdly, instruct blood-establishments and blood-collection entities, through Donor Eligibility Determinations, to question donors about their sexual orientation and whether they had engaged in homosexual acts, despite its legal implications: and, fourthly, instruct blood-establishment to use "surrogate markers" (blood-tests to screen for pathogens, such as hepatitis B, typically associated with the homosexual community) (National Academy of Sciences; Committee to Study HIV Transmission Through Blood and Blood Products, 1995).

In respect to most of these recommendations, the Task Force, with the support of the FDA, expressed deep reservations about their implementation. The Task Force did not view case-reports, Donor Eligibility Determinations, and surrogate marker tests as neutral or "mere" technicality. They problematized these regulatory techniques and artefacts as active actants and sites of sociocultural contestation and difference. As already mentioned, for much of the 1960s and 1970s, the homosexual community was in continuous and heated contestation with the medical and psychiatric community over the classification of homosexuality as a psychiatric illness.

They fought hard and long for homosexuality to be declassified as pathology (National Academy of Sciences; Committee to Study HIV Transmission Through Blood and Blood Products, 1995; Ratele & Duncan, 2004; Conrad, 2007). For the Task Force, the CDC's recommendations were another attempt to re-pathologise homosexuality. They feared that if the FDA approved the recommendations, it would be used to routinely stigmatise the gay community. That is, to represent gay bodies as bio-political risks—or as somehow “contaminated” and infected with pathogens from and against which the general public and body-politic needed to be protected and secured from.

On December, 15–16, 1983, the Food and Drug Administration, CDC, Task Force, and etc. met to debate the CDC's recommendation at a meeting of the FDA's Center for Biologics Evaluation and Research and Blood Products Advisory Committee. However, nearly all of the CDC recommendations were rejected. Besides arguments around costs, risks of shortages posed to haemophiliacs, the legal implications of asking blood-donors to disclose their sexual orientation, etc., the thematic issue remained case-reports and their epistemic value and meaning: the CDC's case-reports were not accepted by the FDA as a legitimate and appropriate means to construct new scientific knowledge (Evatt, 2006). Bruce L. Evatt, the then Director of the CDC's Division of Haematology and co-author of some of the CDC case-reports on blood-products, has noted how: “the audience [at the meeting] expressed an almost universal reluctance to act. The scientific community had yet to see “published evidence that the syndrome was indeed an infectious disease, let alone blood borne and sexually transmitted” (Evatt, 2006, p.2296).

After the CDC published more case-reports on blood-products from October-December, 1982, the Public Health Service convened another and much bigger TAC on 4, January 1983 in Atlanta. As is often the case when TACs are dealing with controversial questions, the Atlanta meeting was a massive public event; the meeting was well televised and a great many federal

agencies, lay and expert associations, took part in its deliberation. And, the CDC's case-reports were, again, at the centre of contestations.

After the CDC presented its case-reports and analysis, the CDC was, again, challenged over its recruitment of case-reports to make its case. The CDC's case-reports were dismissed, again, as indicating adverse reactions: case-reports were, to quote Bruce Evatt, the then Director of the CDC's Division of Haematology who co-authored and presented the case-reports at this TAC, "anecdotal evidence, without merit". Suggesting the mood within the CDC Task Force on AIDS on and after the July TAC, Evatt commented:

Unfortunately, 4 January 1983 became possibly the most discouraging and frustrating day of the epidemic for CDC staff.... In the presence of (and perhaps in reaction to) news reporters and TV cameras, each group voiced essentially the same sceptical reasoning they had at the earlier meeting in July 1982...On this occasion, some were less polite, sometimes attacking CDC [case-reports] as inadequate and over stated...[the view was that] A rare disorder that affected only eight haemophilia patients and one transfusion patient should not force a change in blood policy. (Evatt, 2006, p.2298)

At this stage, AIDS—as scientific and institutional project—looked precarious. Case-reports were rejected as legitimate objects of knowledge making. Many epistemic communities within and without the Department of Health directly questioned the scientific credibility and expertise of the CDC. This questioning reached the stage where the CDC was, again, increasingly excluded from, and periodically undermined in, TACs meetings on AIDS and blood-products.

Instead of case-reports, the calls were for the CDC to concentrate on other non-human actants: mainly, pathogens and blood-screening kits. Instead of case-reports, the CDC was told to concentrate on finding and isolating the unknown pathogen it was claiming was causing AIDS. As

Evatt has put it: “the calls were to “show us the agent” (Evatt, 2006, p.2298). If this agent was isolated, it was hoped; an appropriate blood-screening kit could be constructed and licensed.

THE HEAVY DEFINITION OF AIDS AND THE SEARCH FOR THE “AIDS VIRUS” IN THE US AND HAITI

However, and despite all of these challenges, two significant developments occurred during this period. The first was that the CDC formulated the first epidemiological definition of AIDS. The second was that it and the Service began to invest a substantial amount of resources and time towards isolating what was then called the unknown “AIDS virus”.

The CDC formulated the first definition of AIDS in September 1982 (Centers for Disease Control and Prevention (CDC), 1982). Because it had not yet isolated the “AIDS virus”, the diagnosis of AIDS was heavy, expensive, laboratory- intensive, but, ironically, also very dependent on clinical judgment. To diagnose AIDS, the CDC provided a set of “indicative” diseases that needed to be diagnosed and another catalogue of diseases with “AIDS-like” properties that needed to be excluded (through a list of approved laboratory procedures); these included for, example “tuberculosis, oral candidiasis, herpes zoster)...malignant neoplasms [cancers] that cause, as well as result from, immunodeficiency”. It also provided a list of symptoms from which AIDS could be diagnosed or inferred by clinical observation; “non-specific symptoms (e.g., fever, weight loss, generalized, persistent lymphadenopathy)”. However, ultimately, the diagnosis of AIDS, including the interpretation of the clinical tests, was a clinical judgement made by physicians. Thus, before the licensing of the first HIV-screening kits in 1984, which turn the diagnosis of AIDS into “Thing-Knowledge”, AIDS was an assemblage of complicated, laboratory tests and clinical judgments. It was heavy; it required much technical expertise to diagnose.

During this period, the CDC invested heavily to search for and isolate the “AIDS virus”. After calls for the CDC to “show us the agent” (Evatt, 2006, p.2298), the CDC started screening

the homosexual community and other “high risk” groups for this agent: what would come to be known as The Multicenter AIDS Cohort Study (MACS), which is still ongoing (Muñoz, A. et al., 1993). By mid-1983, the screening programmes went international. The CDC and other agencies of the Department of Health, such as the National Institute of Cancer and its Laboratory of Tumor Cell Biology (LTCB), began collaborating with laboratories and research institutes in Europe: the most important of collaborations came to be the CDC/NCI project with the Pasteur Institute, Paris (Committee to Study HIV Transmission Through Blood and Blood Products, 1995).

Throughout 1983-1984, the CDC acted as a mediator and boundary organisation between the Laboratory of Tumor Cell Biology and the Pasteur Institute; viruses, blood and tissue samples, biochemical kits, results from experiments, criss-crossed between the CDC, the Laboratory of Tumor Cell Biology, and the Pasteur Institute. And, in a story that is too complex and multifaceted to delve into in here, the Laboratory and Pasteur Institute managed to isolate a set of viruses in 1984 that they aetiologically linked to AIDS: mainly, the Human T-cell Lymphotropic Virus Type III (HTLV-III) and the Lymphadenopathy-Associated Virus (LAV)—what, in 1986, came to be called the Human immunodeficiency virus (HIV), or, the “AIDS-Virus” (Committee to Study HIV Transmission Through Blood and Blood Products, 1995).

With the isolation of HIV, a blood-screening kit was manufactured and licensed by the Food and Drugs Administration in 1985 (initially not to diagnose AIDS, but simply as a kit to screen blood products from HIV). Nevertheless, in the same year, the CDC reformulated its definition of AIDS to include seropositivity for HIV. Seropositivity for HIV became a prerequisite for the diagnosis of AIDS and, thus, quickly became a convenient “proxy or serological indicator” for AIDS even if the requirements for the diagnosis of “indicative diseases” remained. Thus, in line with a resolution approved by the Conference of State and Territorial Epidemiologists (CSTE) at its annual meeting in Madison, Wisconsin (June 2-5, 1985), the CDC redefined AIDS as, primarily, the “manifestation of [HIV] infection”. Accordingly, the CDC Task Force on AIDS

decided to exclude as AIDS any cases where there is “a negative result on testing for serum antibody to HIV”. HIV screening kits made the previous, “heavy” definition of AIDS lighter and, as will be discussed later, more mobile for global travel. Although clinical judgments remained an issue, the centrality of the kits made “Thing-Knowledge”, the type of knowledge generated by the kits (seropositivity and seronegativity), more prominent in the diagnosis, and medical and lay discourses about, AIDS.

That is the American context to keep in mind when following American, and later European, scientists as they travel to Haiti and Africa from 1982-1984. They travelled abroad at the time when within the Service there were debates about the definition of AIDS and contestations about its aetiology. Especially in 1982 and 1983, the CDC was struggling to convince some sections of the Service that AIDS was caused by new pathogen and that it was not merely a “gay disease”, but a general pathology that anyone can succumb to. The travel of Euro-American scientists to Haiti and African is directly connected to this American context. It is in this way that we can say the travel is part of a multi-sited narrative.

THE DIFFERENTIAL TREATMENT OF HAITIAN CASE REPORTS ON HIV/AIDS AND THE ISSUE OF RACE AND CULTURAL DIFFERENCE

Haiti was brought into contestations that were taking place within Public Health Service because of case reports the CDC published in August 1982 (a month after the case reports on infants and blood products was published) (Centers for Disease Control and Prevention (CDC), 1982). In August, the CDC published case-reports of AIDS—more specifically, of AIDS indicative diseases— on recent Haitian immigrants. Coming at the time when the first Technical Advisory Committee was established, and the CDC's aetiological claims about the “AIDS virus” was being questioned, the CDC took special notice about the reports. The fact that the Haitians were all heterosexual and, apparently, did not include groups that had injected illegal drugs, only increased their scientific and, incidentally or consequently, their institutional value.

In light of these case reports, the CDC took the decision to send a team of investigators to Haiti (as indicated by CDC investigators interviewed by the National Institutes of Health as part of its AIDS Oral History Project)¹⁸. However, even before the team left the United States, their travel Haiti was hampered by Haitian accusations of racism. This was due to the domestic and geopolitical context within which the CDC's case reports were read, both in the United States and in Haiti. Discourses about racism or generally race permeated and mediated much the United States' relationship with Haiti. This question of racism or “labelling” is suggested in the interviews of CDC investigators (as indicated below) and by the general context within which the CDC's case-reports and scientific statement read in the 1980s.

The publication of case-reports, and the CDC's decision to send teams to Haiti, took place when Haitians were the targets of special attention in American immigration law and pharmaceutical regulation. The CDC's case-reports were published at a time when the US government was restricting the ability of Haitian refugees to enter the United States—that is, when the Reagan administration stopped the previous US-policy of resettling undocumented Haitian refugees (or “boat people” as they were widely called from the 1970s) in the United States. A year before the publication of the CDC's case-reports on Haitians, the US government began a new programme, in cooperation with the dictatorial Duvalier regime, of “interdiction” (Wasem, 2010).

The interdiction programme was a massive geolegal and racialised technique. It involved the US Coast-Guard and other US-agencies conducting coordinated reconnaissance and interdiction operations along the Haitian coastline and sea routes to America. The stated aim was to “interdict” Haitian vessels and refugees “beyond the territorial sea of the United States”; within international waters and outside of the zone where American, constitutional law and protections would apply. Within this zone or “space of exception”, the interdicted vessels and populations

¹⁸ The full transcripts of the interviews, from which much of following analysis is derived, can now be found online in the NIH's digital archive. (National Institute of Health, 2015)

were medically screened and processed before they entered American, territorial waters (Gibney & Hansen, 2005). It is important to emphasize that this interdiction regime only applied to, and was specifically designed to deal with, Haitians.

Once interdicted, Haitians were transferred to an immigration-detention centre in Guantanamo Bay, where they were processed according to American refugee and asylum law. They were classified as either (a) asylum seekers or (b) economic migrants. If classified as the former, they were treated as deserving American protection and were relocated to the American mainland. If classified as the latter they were transported back to Haiti (Wasem, 2010). Compared to many other "boat people" that sought resettlement to the United States in the 1970s and 1980s—for example, Dominicans and Cubans—very few Haitians qualified for asylum in the United States (Zucker, 1996): in the ten years that the interdiction programme was in place only 11 out of 22,940 Haitians interdicted at sea qualified for asylum in the United States (Gibney & Hansen, 2005; Wasem, 2010).

These low numbers were linked to the political and cultural climate of the United States in the 1980s. Haitian immigration was often debated through highly racialised, if not blatantly racist, discourses and representations of Haitians as Other. They were represented, especially in the lay press and media, as barbaric and uncivilised (because of their "voodoo" culture and religion), as disease carrying others that needed to be excluded from the American body politic. As one of the principal co-authors (Dr. Jeffrey Viera) of the CDC's Haitian case reports has noted:

...The original reports of AIDS among Haitian immigrants were sensationalized and misrepresented in the popular press. Some news broadcasts pictured scantily clad black natives dancing frenetically about ritual fires, while others caricatured Haitians with AIDS as illegal aliens interned in detention camps...the impression left with the public in many instances was that AIDS was pervasive throughout the Haitian community. Unlike the

homosexual or drug addict, the Haitian was a highly visible victim of the epidemic who could be singled out by virtue of his ethnic and cultural features... (Farmer, 2006, p.221)

This special treatment of Haitians did not stop with immigration law. It extended to pharmaceutical regulation and the institutional reaction to the CDC's case reports. A good example is with how groups designated by the CDC as having high "risk factors" for AIDS were treated when it came to exclusions to donate blood. When the CDC recommended in 1982 that those with high risk factors for AIDS should be excluded from donating blood, it was only Haitians, not the gay community, that were explicitly excluded from donating blood. The CDC attempted to include the gay community in its exclusionary list, but the community successfully fought off the CDC's recommendations, accusing it of trying to re-pathologise the gay community; it was only in the late 1970s that the community had campaign and mobilised how to declassify homosexuality as a psychiatric illness (American Psychiatric Association, 1973; Bayer, 1987). The CDC's recommendations were also presented as exposing the gay community to legal violence and disabilities since the disclosure of homosexual acts was still, potentially, subject to criminal prosecution in many states of the United States (National Academy of Sciences; Committee to Study HIV Transmission Through Blood and Blood Products, 1995). Despite protests by the Haitian community in the United States for their exclusion, their protests were to no avail.

The result of this exclusion, and the media reports that surrounded it, was devastating for the Haitian economy and problematic for, official Haitian-American relations. The American recession of the early 1980s affected the travel of Americans to Haiti, but the CDC listing of Haitians aggravated the situation. As New York Times reported at the time:

Since the summer of 1982, when American health authorities linked Haiti and the so-far incurable disorder known as acquired immune deficiency syndrome, or AIDS, this country's tourist industry has collapsed... ..hotels stand empty and, waiters, guides and handicraft vendors have been laid off. Hoteliers, local officials

and foreign diplomats complain that the whole country has been stigmatized by AIDS. (Simons, 1983)

THE DIFFERENTIAL TREATMENT OF HAITIANS IN HISTORICAL
CONTEXT: THE LONG AND COMPLEX HISTORY OF EUROPEAN AND
AMERICAN MISSIONS OF SCIENCE TO HAITI

Following the CDC decision, the Haitian Medical Association held a meeting in Port-au-Prince to discuss the matter. Besides challenging the scientific and medical basis upon which Haitians were excluded, the Association accused the CDC of racism and argued for the cultural geography of Haiti to be taken into account when reading scientific knowledge about HIV / AIDS. As the spokesperson of the association, Dr. Laine, commented at the time to the New York Times:

We feel that we have not been given a chance at all... Haitians have become 'victims of C.D.C.'s power and media propaganda... There is no scientific basis to classify a country or a people as a risk group. Even the C.D.C. recognizes that. If AIDS was a Haitian disease, I think the Haitian population would already have been wiped out... American doctors ask Haitian patients: 'Are you homosexual or an IV drug user?' and then wait for a yes or no answer... They get a no answer because homosexuality or even IV drug use is a tough subject to accept in Haitians. (Atman, 1983)

The reaction of the Medical Association did not come out of a historical vacuum, however. Moreover, the travel of American scientists to Haiti was also something not particularly new. Much like Africa, representations and discourses about Haitians and Haiti as Other were not simply the result of the CDC identifying Haitians in case reports or excluding them from donating blood in the 1980s. The discourses about Haitian otherness had long historical roots grounded in Haiti's colonial experience under French rule, which was deeply racialised and informed by the institution and aggressions and violence of slavery and the legal techniques and discourses that legitimised it

and gave it order (Flick, 1990). The violent, slave revolt that destroyed the colonial order in the 18th century and brought about the establishment of the Haitian republic (the first black republic in the western hemisphere) did nothing to substantially erase or amend the racialised institutions and discourses, the meta-structure, through which Haitians were treated and represented by European states and the American government. In many ways, the revolt only reinforced these structures. Various and many techniques (legal, geopolitical, military, and epistemic in nature) were deployed to undermine the Haitian state and, in the case of the United States, contain the spread its revolutionary potential in other slave societies (especially in the American south) (Fick, 1990; Girard, 2010; Sepinwall, 2013).

Because the republic maintained much of and drew inspiration from the African heritage of its (former, slave) population, representations of Haiti as an outpost of African “barbarity” and, indeed otherness, pervaded a great deal of the political and cultural relationships, and exchange, that the Haitian state had with Europe and the American government. Linguistically it was seen as other, its religious beliefs and practices were treated as foreign, and, eventually, the very culture and body of Haitians was classified by Euro-American science as less evolved and different. The same disciplines and communities of Scientific Racism that did so much to legitimise and facilitate colonial rule in other places in the world, especially in Africa, also played a considerable role in constructing, reinforcing, disseminating, and generally legitimising the oppression and treatment of Haitians as other (Renda, 2001; Chandler, 2006; Farne, 2006; Matthewson, 2003).

So, from the 18th century, and continuing for much of the 19th and 20th century, besides economic warfare and military occupations, scientific “civilising missions”—or “Missions of Science” as they were contemporaneously called—were sent from Europe and the United States to Haiti. These “Missions” were not merely about scientific enquiry per se, but also, about issues related to race and racism (as explained in the previous chapter) and the systematic problematisation, as objects of scientific inquiry, Haitians as other. It involved studying the

Haitians' foreign culture and customs; measuring and classifying their foreign bodies and skulls; placing them within and at the bottom of evolutionary hierarchies of civilization and progress that ended with a European referent or endpoint. Furthermore, it included surveying their environment for exotic pathogens; and, generally, scientifically and systematically cataloguing all the ways that the cultural, racial, and environmental geography of Haiti made a foreign, and possibly threatening and dangerous, place for the American and European body-politic and imaginary (Schmid, 1995; Fluehr-Lobban, 2000; Renda, 2001; McBride, 2002; Barros et. al, 2009; Matthewson, 2003; McClellan, 2010)

When the Haitian Medical Association and government complained about being “labelled” this was the historical undercurrent or repertoire they were drawing from. The exclusion of Haitians, the widespread representations of them in American media in the early 1980s as disease-carrying and uncivilised “voodoo people”, was not new, but a structural and institutional, lingering continuation Haiti's colonial past and its (unsuccessful) attempt to move beyond it.

HAITIAN RESISTANCE TO AMERICAN HIV/AIDS RESEARCH

Despite this history and accusations of racism directed at it, the CDC formally requested entry to study AIDS in Haiti in late 1982. Unsurprisingly, the Haitian government refused, citing the exclusion of Haitians as a basis. As one of the CDC investigators later interviewed by the National Institute of Health has recalled: “the Haitians came and they basically said, “We do not want the CDC. They are the ones who have labelled us...” (Quinn, 1996). The traces and remnants of the colonial past, and the discourses and imaginary of racism that it constructed was, thus, colouring the travel of scientific knowledge to Haiti (Farne, 2006).

Yet, after initially refusing the CDC entry, the Haitian government granted permission the following year. The American investigators were permitted to enter the country on the condition that their investigation took place under the auspices of the World Health Organisation. After

being re-designated WHO investigators, a small team of American scientists entered Haiti in 1983 (mainly composed of a delegation from the CDC and another agency of the Service, the National Institute of Allergy and Infectious Diseases (NIAID) (Krause, 1988; Quinn, 1996; Curran, 1998). Because some members of this delegation played important roles in the travel of AIDS and the establishment of Project SIDA in Africa, it's worth highlighting the significance of two scientists or later played important roles in Africa: Dr. Richard Krause and Dr. Thomas C. Quinn.

When the team arrived in Haiti, they faced immediate resistance from the local, Haitian, medical community (the same community that had previously accused the CDC of racism). The “labelling issue” had not gone away. Resistance was particularly noticeable in respect to American requests to have access to hospital wards. Cautious not to provide American investigators with more exhibits or a “pretext” to perpetuate the labelling of Haitians, local physicians refused to cooperate with the Americans. Cooperation was only forthcoming, apparently, after senior members of the Haitian government intervened. As Dr. Krause, the lead-American investigator sent to Haiti, has recalled:

We knew there was a “Haitian connection”...But the Public Health Service [Department of Health] could not get into Haiti in 1983, because the Haitians were so angry...We got there and were met by the assistant health minister. He took us to the hospital, where we were going to talk with Haitian doctors, but the doctors were so angry with the Americans that they would not talk. The assistant minister said that the Americans were going to see AIDS patients, even if he had to take them on rounds himself... So we did go on rounds... (Krause, 1988)

THE COMPLEXITY OF HIV/AIDS RESEARCH AND DIAGNOSIS IN HAITI
WITHOUT LABORATORIES: CLINICAL OBSERVATIONS, PLACE, TRUTH-
SPOTS, AND THING-KNOWLEDGE

Besides negotiating and dealing with the effects of Haiti's colonial past, the team also had to deal with the lack of Truth-Spots in Haiti. Without laboratories, the team could not, according to the epidemiological definition of AIDS that the CDC formulated in 1982, diagnose the syndrome accurately in a form that their medical claims would be readily accepted in the United States. Alternatively, and to be more precise: their clinical observations were vulnerable to being challenged as being merely subjective and difficult to disaggregate from the local and particular circumstances of Haiti.

This problem, as explained above, can be tied to the CDC's definition of AIDS, which, before the isolation of HIV and the licensing of the first HIV-screening kits, relied heavily on laboratory tests to diagnose "indicative diseases" and exclude diseases with AIDS-like properties. AIDS was, thus, a heavy and "thick" medico and techno-scientific object. Its agility and ability to travel was also restricted because many of the essential laboratory tests and procedures required to diagnose AIDS were only available at selected sites in the United States and Europe; and these clinical laboratories were highly regulated by law because of their epistemic and medical significance. Within the context of the diagnosis of AIDS, it could be argued that the laboratories increasingly took the role of Truth-Spots. As Gieryn has argued, they offered, a "presumption of equivalence"—a "sacred space" (Capshe, 1992) and currency, if not guarantee, of authenticity, legitimacy, reliability, and validation. Knowledge derived from them represented knowledge that was "credible and applicable anywhere and everywhere" (Gieryn, 2002, p.113).

Laboratories were especially important in Haiti because of the material condition and environment of the Haitian hospital wards. As reported at the time by American scientists that travelled to Haiti, the wards were problematic in many ways. As the *New York Times* described one such hospital:

... Haiti's poorest AIDS patients are in the dark, crowded wards of the free State University Hospital on the other side of town. The hospital, one doctor here said, "has no laboratory

and is short of medicine, water, everything." For many months, an isolated back room was set aside for AIDS patients...but the staff refused to enter and patients were dying quickly. Now the AIDS patients are scattered in the general ward. "We are often not even sure if we are dealing with AIDS," a doctor said. "The patients may have had diarrhea for a year, they come in very late in the disease and they die before we know"... people here were often exposed to the dirty needles of picuristes, the ubiquitous, often untrained people who administer injections at home or in the backroom of a pharmacy (Simons, 1983).

Despite these material conditions, the American team nevertheless made observations about AIDS in Haiti, relying on clinical observations to diagnose AIDS. Instead of laboratory tests (setting a precedence that was repeated in Africa), the team diagnosed AIDS through such observations as patients, "wasting away", "coughing", and showing physical signs of tuberculosis (Quinn, 1996)). This lack of Truth Spots was, of course, very frustrating for the team because what they wanted to report was directly relevant for debates that was taking place in the Public Health Service. Their clinical observations were suggesting that AIDS was affecting heterosexual populations in Haiti, indicating that, at least for them, it was a generalised pathology, possibly one caused by a pathogen, against which all were at risk. Thomas C. Quinn, one of the principal investigators in the team, touched on this point in an interview:

The first thing that we saw were these women, who were just wasted away, coughing, probably having Pneumocystis or tuberculosis or whatever...It brought home to me that, number one, this disease was not affecting just one gender; it was probably going to hit both.. We asked them lots of questions: Why were these women getting the disease if it was only supposed to be in gay men?...as we went around those clinics, it was clear to us that there was some evidence of heterosexual spread (Quinn, 1996)

When the team reported their clinical observations and conclusions in the United States upon their return, the focus was on the lack of Truth-Spots in Haiti. Haitian hospitals were

presented as illegitimate spaces to construct scientific knowledge (O'Malley, 1988). The observations of the team were, largely, rejected and/or challenged. Quinn, again, has noted:

The scenario, as I recall it, that the popular press and others got at the end was that this was still not “really a heterosexual disease.” Women were not spreading it to men. This was solely male to male and male to bisexual male, if you will, who then gave it to the woman. But the woman never gives it to the man. No one in 1983 thought that could happen that I can recall (Quinn, 1996).

SUMMARY: HIV/AIDS RESEARCH IN HAITI IN THE EARLY 1980s

The construction of AIDS in Haiti was coloured by American notions of Haiti and Haitians as a racialised Other. This sense of otherness permeated how Haitians were treated in American immigration and pharmaceutical law and, importantly, the way that Haitians read and contested American scientific knowledge. In addition, because Haiti lacked Truth-Spots and the technical facilities to diagnosed AIDS in the early 1980s, the clinical observations, conclusions, and diagnostics about AIDS.

The travel of scientific knowledge about AIDS to Haiti was coloured and hampered by Haiti's colonial past and the racialised imaginaries, discourses, and representations of Haitians that it left in place. Its travel was further limited by the lack of Truth-Spots in Haiti. Because the diagnosis of AIDS, before the licensing of the first HIV screening kits, was heavy and laboratory - intensive, the clinical observations and conclusions that the American team made about AIDS in Haiti were not accepted, and were challenged, in the United States.

However, their “Mission of Science”, their trip to Haiti, and the clinical observations that they made there became significant because of developments in Europe, where there were reported cases of AIDS on heterosexual, African immigrants. The reports, which indicated similar observations to those that were made in Haiti (mainly, the diagnosis of AIDS on heterosexual

populations), brought together an international network of scientists that had previously worked together in Africa. Through this network and collaboration, another “Mission of Science” would emerge: Project SIDA. Like the Mission to Haiti, it too faced problems about the movement of AIDS. It too had to negotiate the remnants and traces left in place by colonialism, principally: the racialised imaginaries and representations of Africans as other and African translations and contestations of scientific knowledge through a memory, or discourse informed by, this colonial past.

PART TWO: PROJECT SIDA: EARLY HIV/AIDS RESEARCH IN AFRICA AND AFRICAN READINGS AND CONTESTATION OF THIS RESEARCH

Continuing with the aim to build multi-sited narratives of AIDS, this section begins to trace the emergence of Project SIDA by setting out the transnational context within which it emerged; by introducing the transnational network of scientists and institutions that established it; and, by examining how the colonial past influenced the selection of Zaire as the site of research.

CONFERENCES AND PLANS TO ESTABLISH PROJECT SIDA

The earliest reported cases of AIDS in Africa were published in the *Lancet* on 2, July, 1983 by a team of clinical and micro-epidemiological investigators from the Haematology Laboratory and Laboratory of Electron Microscopy of Saint-Pierre University Hospital, Brussels. Entitled “Virus-Like Particles in Lymphocytes of Seven Cases of AIDS in Black Africans” (Clumeck, et al., 1983), it reported cases of AIDS-indicative diseases and symptoms on African immigrants from Zaire. Whereas the clinical observations from Haiti were challenged because it was not derived from Truth-Spots, the Saint-Pierre laboratories did not face the same problem: they diagnosed AIDS using the CDC’s epidemiological definition of AIDS (as formulated in 1982) and its stipulated, laboratory procedures (Clumeck, et al., 1983).

For the American team that went to Haiti, Saint-Pierre publication was read with much excitement (as their interviews with the NIH suggest). For, in many ways, they read it as validating observations that they made in Haiti; the Zairian cases, like the ones in Haiti, were of heterosexual patients without risk factors typically associated with AIDS in America (that is, there was not a history of previous drug abuse or a history of taking blood products). Quinne, in a National Institute of Health interview, recalls the American reading of the report:

Then there was a report in Europe of Africans with the same disease who had come from Zaire and other places to Belgium, and France, and the patients were both men and women. That was all I needed to see. It was, I think, just one report, but that was enough for me. I felt this was not just a gay disease, and I doubted that this was dirty-needles. But the only way we were ever going to find out was to go to Africa or go back to Haiti and set up good prospective long-term epidemiologic studies. (Quinn, 1996).

The Saint-Pierre publication was most opportune because two months after the publication, the International Congress for Infectious Diseases was convened in Austria in August, 1983. Much like the transnational Tropical Medicines conferences of the colonial era (as discussed in chapter two), it provided an opportunity for European and American scientists interested in the emerging scholarship about AIDS in Africa to meet, compare notes, exchange ideas, consider collaborations, and generally, network, socialise, and rekindle past friendships and associations.

So, as argued elsewhere in much STS scholarship (Amsterdamska, 2008), the Vienna Congress provided, aside from its formal and professional dimensions, an informal space on nexus where plans and collaborations could be made. Thus, it was at hotel corridors; during intermissions and coffee breaks; at lunch and in hotel rooms that the idea of establishing an AIDS research project in Africa emerged.

The discussions about planning of the project took place at informal meetings between the directors of the Belgium Institute of Tropical Medicine (ITM) and the NIAID. After their discussions, scientists from their respective institutes met to finalize, from and continuing for months after the Congress, the details for a joint, Belgian/American project. Some of the key planners and participants were Thomas Quinn (who was part of the Haiti mission) and another scientist: Dr. Peter Piot, from the ITM, who co-authored many of the project's early and influential papers and, later, became the director of The Joint United Nations Programme on HIV and AIDS (UNAIDS) in the 1990s. In describing the informal meetings that took place, Thomas Quinn, has recalled in an interview;

My recollection is that Piot and I were talking about this spread of the disease, and that I had been in Haiti. I told him what I had seen, he told me what he was seeing in Belgium, and we were saying, “We really should set up a project in Africa.” I said, “I work for this man, Dr. Krause, who is interested in setting up projects overseas to help internationally to try and figure out what is going on...So I introduced Piot to Dick [Dr. Richard Krause].... Piot went to Dick and then Dick called me like he had called me for Haiti.” (Quinn, 1996)

The Belgian/ American collaboration was facilitated by previous institutional connections through joints projects conducted in Africa (on Ebola in the 1970s) (Piot, et al., 1977; Krause, 1988; Quinn, 1996; Curran, 1998, Piot, 2008).

THE HISTORICAL AND COLONIAL CONTEXT OF PROJECT SIDA AND THE PARTICIPATION OF THE BELGIUM INSTITUTE OF TROPICAL MEDICINE

The selection of Zaire and the involvement of the Belgium Institute of Tropical Medicine were not, however, incidental or accidental. The Institute had long and deep historical connections with Africa, generally, and Central Africa, specifically (Neill, 2012); before it was called the Institute

of Tropical Medicine, it was known as the Prince Leopold Institute of Tropical Medicine (so named in honour of Leopold II, King of Belgium).

The Prince Leopold Institute of Tropical Medicine was deeply implicated in Leopold II's colonial project and "Civilizing Mission" in what came to be, initially, called the "Congo Free State"; and then later, Zaire. The Free State began, and was promoted and justified by Leopold and the Euro-American scientific community that supported him, as a scientific and philanthropic project to survey and map the Congo: a mission of science, geography, exploration, and civilisation. However, the mission quickly morphed into the brutal, commercial, militaristic, and colonial project that came to be the Belgian, Colonial Empire, composed of the colonies of Congo (Zaire, what is not known as the Democratic Republic of Congo), Burundi, and Rwanda.

As with many other Tropical/Colonial Medicine institutes established in the late 19th and early 20th century described in Chapter Two, the Belgium Institute of Tropical Medicine was formed to, *inter alia*, survey Belgian colonies and devise technical and medical solutions for the Belgian, colonial project (Vanthemsche, 2012). As with similar organisations, it provided technical advice and services for colonial administrators and its practices were intertwined with other disciplines of Scientific Racism that emerged and travelled to Belgian colonies. It was part of the extraordinary number of specialists that went to Central Africa because of the Belgian, colonial project, as Vanthemsche notes in respect to the Congo:

At the beginning of colonisation, geography was the rallying point for various facets of the intellectual grasp of the Congo...Anthropologists and linguists classified the indigenous society and languages and began to study colonial and traditional laws and local customs. Geologists, climatologists and hydrologists examined the inanimate environment, while zoologists, botanists, physicians and tropical agronomists studied the living. In just a few decades all these sciences underwent massive development. Belgian researchers accumulated an impressive mass of knowledge on the Congo (Vanthemsche, 2012, p.75).

After the dismantling of the Belgian, colonial empire, the racialised discourses and thinking that informed Belgian interventions in Africa did not go away. Many of the themes from Colonial/Tropical Medicine described in Chapter Two persisted. The effects and “aftermaths” of colonial experience were still being felt. Dr. Peter Piot, who led Project SIDA, has commented on the institutional culture of the Institute of Tropical Medicine in the 1970s and early 1980s. Speaking about how Belgium’s colonial history facilitated his entry in tropical epidemiology and microbiology, he comments on the institutional culture of the institute:

...epidemiology promised the thrills of investigator and discovery. And thanks to our often blood-soaked, century-long colonial occupation of Africa, in Belgium's medical history there was a rich tradition of both. The Prince Leopold Institute of Tropical Medicine in Antwerp was founded in the early 1900s to train medical personnel of the colonies and conduct research on exotic diseases. Even in the 1970s, it was dominated by professions who had worked in the former Belgian Congo, and who had a political outlook that was ultraconservative and steeped in racial condescension... (Piot, 2012, p.9)

In addition, as with other former European colonial powers, Belgium maintained various geo-political, economic, military, commercial, and institutional connections with Central Africa after the formal dissolution of its colonial empire (Dudley, 2003; Vanthemsche, 2012). For example, through tropical medicine institutes established in Zaire—such as the Institut National de Recherche Bio-Medicale (INRB), Kinshasa— and the work of Belgian scientists in WHO projects (for example, on the Ebola outbreak of the 1970s), Belgium scientists continued to work in Zaire; through their work there, a number of Belgian scientists, including many from the Belgium Institute of Tropical Medicine, developed close institutional and bureaucratic relationships with the Zairian state and the Zairian, medical, and scientific community that emerged after de-colonisation. For example, before heading to Zaire to establish Project SIDA, Piot has recounted a meeting that took place between the American team and the Institute of

Tropical Medicine. In this account, he highlights how senior members of the Belgium Institute of Tropical Medicine felt their colonial and institutional connections with Zaire gave them privileged knowledge of Zaire. As Piot has noted:

We all met in Antwerp a few days before our planned departure for Zaire. Despite the almost palpable presence of clashing agendas, this meeting went fairly smoothly except for the heavy-handed intervention of the director of the Belgium Institute of Tropical Medicine, who declared solemnly that "we Belgians" knew the Congo—we knew "these people". (Piot, 2012, p.129)

Belgium was not alone in this. Other European states established institutes in their former colonies. These institutes were often modelled on European exemplars or established as subsidiaries or quasi-branches of European organisations (e.g., The Institut Pasteur (IP), Bangui, Central African Republic; Institut National de Recherche Bio-Medicale (INRB), Kinshasa, Zaire; the Centre International de Recherches Medicales de Franceville (CIRMF), Gabon; the Centre Pasteur du Cameroun (CPC), Yaounde, Cameroon—the latter became especially important in the 1990s in respect to the isolation of the second variant of HIV. To suggest some the ways that these institutes operated in the 1980s, Guillaume Lachenal describes the activities of the Centre Pasteur du Cameroun (CPC), Yaounde, Cameroon:

Situated in the heart of the administrative centre of Yaoundé, their [the CPC's] massive buildings, close to the Central Hospital, embody the heritage of French scientific presence. In 1985, "health hill" accommodated, in fact, many French volunteers, doctors or researchers who, each in his or her own way, followed in the footsteps of French colonial doctors who have been in Cameroon since 1916. Its large laboratories... were managed by French military doctors... Linked to the Pasteur Institute in Paris since its founding in 1959, the Pasteur Centre [was] under the aegis of the expatriate managerial staff, the Pasteuriens. (Lachenal, 2006, p.189)

This network of institutes provided a mechanism for Euro-American knowledge and expertise to be transmitted to African, medical professionals, and, importantly, it provided a geo-cultural and political link between European states and their former colonies; as we shall see in Project SIDA, research projects established by these institutes were one of the means through which African physicians and scientists collaborated with their European counterparts.

SUMMARY: PROJECT SIDA AND THE COLONIAL CONNECTION

The establishment of Project SIDA and the selection of Zaire as a site of research were informed by colonial traces, links, and experience. Like their predecessors in the 19th century, the Vienna Congress provided a space for the transnational, Tropical Medicine community to meet, exchange knowledge and artefacts, and plan joint projects. Additionally, it provided a social space for “informal” discussions and meetings to take place, and for the transnational network to rekindle past relationships and projects. When a decision was made to study AIDS in Africa, the selection of Zaire and the decision to bring in the Belgian Institute of Tropical Medicine, was influenced by colonial and post-colonial experience; Zaire was a not foreign land for the Institute and its scientists. As director of the Institute declared: “we Belgians knew the Congo—we knew “these people””. This “knowledge” of Zaire/Congo had a long history intertwined with role of Colonial/Tropical Medicine community of the 19th and early 20th century. Accordingly, the travel of AIDS from America and Europe to Africa had a spatial and geo-political dimension. It had “traces” and “remnants” from the colonial past.

PROJECT SIDA AND THE COMPLEXITY OF HIV/AIDS IN AFRICA: THE REGIONAL SPECIFICITY OF HIV/AIDS IN AFRICA

In this section, the focus moves to the establishment of Project SIDA and to the ways that Euro-American scientists negotiated the issue of political geography and colonial history through Truth-Spots. Accordingly, it describes the establishment of laboratories in Zaire, but argues that

despite the use of Truth Spots, Project SIDA's knowledge claims about AIDS in Africa faced extrapolative and translative challenges; that is, challenges in having its claims about AIDS accepted and legitimated in Europe and America. It describes how AIDS came to have a geo-epistemic definition based upon African Otherness.

MAMA YEMO HOSPITAL AND THE BUILDING OF TRUTH-SPOTS

As with the CDC/ NIAID mission to Haiti in 1983, Zaire was a difficult place to conduct AIDS research. As with Haiti, many of the laboratories and research-facilities (i.e., Truth-Spots) that Euro-American scientists used in Europe to diagnose AIDS were absent; again, if not always in fact, then in quality and level of technical and financial investment.

It is worth repeating at this stage that AIDS was a heavy and laboratory-intensive— and thus epistemically and technically expensive—artefact to construct before the isolation of HIV in 1984 and the construction of the first, HIV-blood kits in 1985. As Piot has noted on this point: “in 1983, it [diagnosing AIDS] was still far more complex and indirect... [it required]...working in an area of obvious diagnostic uncertainty” (Piot, 2012, p.135). A diagnostics of AIDS was still mostly based on clinical observations. However, certain elements of diagnosis required a great deal of laboratory artefacts and facilities, technical expertise that Zaire lacked or had at very rudimentary level; as Piot phrased it, Zairian scientific institutions were in “dire straits professionally and financially” (Piot, 2012, p.134)..

Accordingly, like Colonial/Tropical Medicine practitioners before them (as described in Chapter Two), the first major act of Project SIDA was to establish a huge, micro-epidemiological and clinical laboratory, funded largely by the CDC and NIAID (Piot, 2012). The NIAID/ CDC recruited laboratory engineers from the American Department of Health and imported a variety of laboratory equipment into Zaire while the IMT recruited clinical staff with expertise in Tropical Medicine (Cohen, 1997). In a short period of time, Project SIDA grew into a large-scale technical,

financial, administrative, and logistical operation, employing a Zairian, support staff of about 300 by its first year of operation in 1984 (Cohen, 1997; Piot, 2012).

As with the American mission to Haiti in 1983, Project SIDA needed access to appropriate patients; that is, candidates with the AIDS-like symptoms and pathologies that the Euro-American team wanted to study (Piot, 2012). Accordingly, the laboratory was established at the main, general, hospital in Zaire: The Mama Yemo Hospital in Kinshasa (sites that were not foreign to Project SIDA from the Ebola days in the 1960s and 1970s) along with other facilities, such as the University Hospital, Clinique Ngaliema, and the Clinique Kinois, Kitambo Hospital where blood-banks were stored and sexual-health clinics were based (Cohen, 1997; Piot, 2012).

Whereas having access to hospitals wards in Haiti was difficult, Project SIDA did not face the same difficulty in Zaire. It was not a foreign land for many members of the project. Through institutional connections already mentioned, and geo-political alliances between America and Zaire in the Cold War, and their previous work in the Congo in the 1960s and 1970s, scientists from the project had developed and sustained relationships with the Zairian bureaucracy and medical community; Piot was given a prestigious honorary award by the Zairian president, Mobutu Sese Seko (Piot, 2012). Furthermore, as in Haiti, local, Zairians (physicians, laboratory technicians, and civil servants attached to Project SIDA) assisted Project SIDA in negotiating the bureaucratic, political, and sociocultural landscape of Zaire; these Zairians did much of the laboratory work. They also did much of the recruitment and selection of the appropriate candidates for research (particularly when it came to female, commercial sexual workers). As Cohen notes in his investigation of Project SIDA:

...It's really thanks to [them] that the whole project could start... Not only did they [local Zairian physicians] welcome the foreigners, [they] also deeply impressed them with [their] independent observations about AIDS, taking [the Euro-American teams] around the

wards of Mama Yemo and pointing out patients who [they] thought had the disease.
(Cohen, 1997, p. 1565)

PROJECT SIDA AND THE GEOGRAPHIC AND BIOLOGICAL DIFFERENCE OF AFRICA

Despite the establishment of Truth-Spots, the question of African Otherness, much like the themes of difference described in Chapter Two in respect to Colonial/Tropical Medicine, was a major issue for the Euro-American team. It was an immediate, epistemic challenge to be negotiated. In some ways, this issue was at the heart of the project, at least for the work allocated to the Belgian Institute of Tropical Medicine. As Piot has commented, Otherness was not just about geo-physical and climatic difference. It was, also, about biological/generic Otherness. Piot, who did much in the design of Project SIDA's research, has thus commented:

[the Belgian Institute of Tropical Medicine] was specifically responsible for describing in detail the clinical spectrum of [AIDS] in Central, as it was not known then how exactly AIDS manifests itself in a completely different environment than in the West in terms of nutrition, the interaction with other frequent infections, and genetic makeup (Piot, 2012, p.143).

This issue of Otherness was not restricted to the orientation of Project SIDA's work, it was also a factor in limiting the extrapolative and translative value of their work. It regionalised and localised it. For example, as with Haiti, Project SIDA focused on heterosexual transmission. However, when it attempted to publish its early results in the *Lancet* and the *New England Journal of Medicine*, it was periodically reminded of African Otherness. As Piot, who was the co-author of the early papers, has stated, Project SIDA was told periodically that its publications were: "of local interest only" and that "this thing [they] found in Africa— it's not AIDS, its immune deficiency, maybe it's something to do with malnutrition or [tropical] parasitic infections" (Piot,

2012, p.135). The legacy of Colonial/Tropical medicine was still there: the “traces...marks, residues or remnants left in place by [colonial] life” (Anderson, 2010, p.7) still tinged epistemic practice.

Part of this extrapolative and translative problem was, of course, due to the glocal nature of Project SIDA’s work in Africa. As already noted, Project SIDA was established at a time when the CDC was in heated contestation with other agencies of the American, Public Health Service over the etiology of AIDS. The CDC’s attempt to problematize AIDS beyond homosexuality through case-reports was being challenged; not just in the Health Department, but, more broadly in the medical community. To indicate the extent of this challenge, Piot notes that when Project SIDA submitted its early manuscripts for publication in the *New England Journal of Medicine*: “an early referee wrote as sole comment: “it is a well-known fact that AIDS cannot be transmitted from women to men”. People had already developed the mind-set that this was “just” a gay disease.” (Piot, 2012, p.139). Instead of case-reports, the CDC was being told to “show us the agent” (Evatt, 2006, p.2298), to isolate the pathogen it was claiming was causing AIDS.

Therefore, besides the interest in African Otherness, Project SIDA, like the CDC’s investigation in Haiti, was also about what was taking place in the America. That is, the huge laboratory in Zaire was not just about studying AIDS in foreign environments and genetic Others, it was also about screening Africans for the “agent” the CDC was being asked by the FDA, and others within Department of Health, to isolate. In this respect, like Colonial/Tropical Medicine, Project SIDA had an element of “Virus Hunting” in it—an element that was probably informed by the previous experience of Ebola research in the 1970s.

PROJECT SIDA AND THE REGIONAL DEFINITION OF AIDS: THE BANGUI DEFINITION AND “AFRICAN AIDS”

Putting the “virus hunting” aspects aside for a moment and coming back to the issue of African Otherness: previously, I have noted how Colonial/Tropical Medicine struggled to study European diseases in the colonies/tropics. Using Philippa Levine’s example on venereal diseases, I have highlighted how European notions of Otherness made it difficult for European diseases to be studied and diagnosed in colonial populations. Their otherness was a barrier in constructing universal knowledge, in diagnosing diseases without the tinge of local difference. Without Thing-Knowledge to make this problem less pronounced, it came to be a major contributor the geo-specific turn that AIDS took in Africa in the early 1980s. In other words, construction of the “Bangui Definition of AIDS”.

On 22-25 October, 1985, the emerging Euro-American epistemic-community on “African AIDS” met in Bangui, Central African Republic for a workshop on AIDS in Central Africa (World Health Organization, 1985). As with the Vienna Congress the previous year, and colonial practice in the 19th and early 20th century described in Chapter Two, the workshop provided a place for tropical medicine practitioners to meet, network, and exchange expertise, techniques, and knowledge—it was a boundary and glocal space.

Bringing together investigators from Project SIDA and other European-American researchers institutes working on AIDS in Africa—such as the Institute Pasteur—the Bangui workshop met to discuss the “microgeography of knowledge-production” (Livingstone, 2004); that is, the problem of doing research in Africa and the need to define a standardised, African-specific, epidemiological case-definition of AIDS.

Project SIDA took the lead in constructing this geo-specific definition. It successfully argued that: because Africa lacked Truth-Spots, because Africa’s tropical climate and diseases made it difficult to disentangle AIDS from co-founding local issues; because of the “genetic makeup” of Africans, an African definition of AIDS needed to be defined. Defined not through laboratories and Truth-Spots, but, through general, situated, clinical observations, “African AIDS” was defined as,

inter alia, a clinical diagnosis of “weight loss...diarrhoea ... fever; headache; cough; difficulty in swallowing” (Piot, 2012, p.136).

However, this African-specific definition was problematic. The Bangui Definition established geography as an important ontological and epistemic actant in the diagnosis and construction of AIDS (a spatial turn that would come to haunt Project SIDA later, as seen below, when Africans would challenge the “placelessness” of HIV-kits as “Thing-Knowledge”). The major definitional divide between Euro-American AIDS and African AIDS centred on Truth Spots and Techno-Science: African AIDS was based upon situated, subjective, clinical judgement, which was difficult to travel globally, whereas Euro-American AIDS had greater mobility and legitimacy in terms of the geographies across which it could enter and be legitimated.

SUMMARY: THE REGIONAL DEFINITION OF AIDS AND THE ISSUE OF PLACE AND BIOLOGICAL DIFFERENCE

The idea of difference coloured Project SIDA’s knowledge practices in Africa. Zaire— or rather, Zairians—were not studied and treated in their own terms, but as an Other. As Piot commented, it was not just the Zairian “environment” that was Other, it was Zairians themselves; that is, their “genetic makeup”. These biological and geo-physical differences were highlighted as a “problem” to be negotiated. And, this “problem” limited the ability of the knowledge claims of Project SIDA being accepted in Europe and America. The “problem” meant Project SIDA’s claims were translated as only being of “local interest”. In addition, the problem also meant that AIDS became sticky and attached to geography (an aspect of Euro-American research in Africa that would be relied upon by Africans to challenge the universal claims of HIV-kits, as we shall see below). Instead of universal diagnosis and knowledge, Project SIDA ended up with the Bangui Definition; multiple translations and dialects of AIDS; multiple translations coloured by the traces and remnants of colonial experience.

AFRICAN READINGS AND CONTESTATIONS OF HIV/AIDS RESEARCH:
RESISTANCE, THING-KNOWLEDGE, AND THE OUT OF AFRICA THEORY OF
AIDS

In this section, the reaction of African states to Project SIDA and Euro-American science is examined. Specifically, the theory that AIDS came from Africa (what I will refer to as the “Out of Africa Theory”) is looked at. As part of this analysis, the section returns to Thing-Knowledge and explores how HIV-blood kits coloured how the Out of Africa Theory was constructed and contested. In addition, and continuing with the analysis of how geography played a role in colouring Euro American knowledge, the section looks at how African states deployed the narrative of colonialism, generally, to contest and problematize the claim that AIDS was of African origin. Furthermore, Out of Africa Theory is examined as a link that connected Haiti’s story with that of Africa.

THE OUT OF AFRICA THEORY AND THE HAITI/AFRICAN
CONNECTION

The idea that AIDS might have an African origin was first suggested at the International Congress for Infectious Diseases, in 1983 by Dr. Richard Krause (the, then-Director of the National Institute of Allergy and Infectious Diseases (NIAID) and Office of Tropical Medicine and International Research (OTMIR); and one of the principal investigators sent to study AIDS in Haiti and, as we saw above, one of the main architects of Project SIDA.

At the International Congress, Dr. Krause, presented a paper on the “Koch's Postulates and the Search for the AIDS Agent” (Krause, 1984). Coming at a time when contestations over aetiology were raging in the American Department of Health, his paper was mostly about techniques to establish causation in clinical and micro-epidemiology. In exploring these issues, however, he touched on the question of how AIDS might have started; or, rather, and more

specifically, how the AIDS-causing pathogen might have spread. Accordingly, he made comments about the role of socio-economic factors in the spread of diseases. Using the historical examples of tuberculosis and syphilis in 19th and early 20th century, he argued for a socio-economic understanding of the emergence of AIDS. Like tuberculosis and syphilis, Ebola in the 1970s, he argued that the AIDS-causing pathogen probably emerged and spread from socio-economic transformation. That is, from a virus that was isolated in a small community, but spread more widely, sub-nationally, nationally, and then internationally because of industrialization and all the migratory movements that accompanies it (e.g., the mass movements of rural populations to urban areas).

Throughout his presentation, Krause did not name Africa specifically. Most of his references were from Europe and America. However, given the audience to whom the presentation was made, and Krause's involvement in the Haiti mission, and the fact that Project SIDA was being discussed at the Congress, and many of the scientists that had worked on Ebola were present, the implication was salient to many: he was suggesting that the AIDS-Virus was probably isolated in African villages, but, spread, like Ebola, into cities because of colonial industrialisation and urbanisation. Furthermore, coming at a time when the reports of AIDS on Zairian immigrants had just been published, the Africa-AIDS connection started being discussed openly. And it did not take long someone to make the link explicit. A year after his presentation, the Africa-AIDS connection was made explicit in an article published in 1985.

This theory was a bit different from the dominant theories at the time, especially those that grew after the American mission to Haiti. After the Haitians case-reports of 1982, debates over whether Haiti was the place of origin of AIDS (or, more specifically, the place of origin of the "AIDS-Virus") was commonplace. One theory suggested that the AIDS-Virus came from Haitian pigs; that this virus transferred from pigs ("African swine fever") to humans through voodoo rituals or other Haitian sociocultural practices (a theme that would re-appear in respect to Africa).

Despite this and other similar theories, the dominant theory before 1985 was that AIDS was an American—and particularly, homosexual—disease. A disease that travelled to such places as Haiti via networks of sexual tourism; specifically, according to the American team that developed this theory, the exploitation of economic vulnerability of Haitian men. As Thomas C. Quinn explained in an interview, the theory was that:

... gay men went to Haiti for vacations, and they went to these poor Haitians, who would do anything for some money, and would engage in homosexual acts even though the Haitian men might be heterosexual. Then the Haitian men would go back to their wives and infect them. (Quinn, 1996)

However, after the publication of Zairian case-reports in 1983, the establishment of Project SIDA in 1984, and the isolation of HIV from samples taken from African immigrants in the same year, theories about the origin of AIDS—or, rather, the AIDS-Virus that came to be HIV—increasingly centred on Africa. One of the main reasons was construction and licensing of the first, HIV-blood testing kit in 1985. The kit fundamentally changed the nature and travel of AIDS.

THE IMPORTANCE OF HIV-BLOOD KITS IN HIV/AIDS RESEARCH

When the first, HIV-blood kit was licensed and incorporated into the epidemiological definition of AIDS in 1985, the thick and cumbersome characteristics of AIDS were refined and reduced to Thing-Knowledge (as explored in more detail in the section below). It has already been repeatedly highlighted how the laboratory-intensive nature of diagnosis of AIDS made it difficult to travel; especially, where and when AIDS was diagnosed in the Tropics. It required building expansive Truth-Spots and recruiting specialists expertise (as Project SIDA demonstrated). With the kit, however, AIDS could be diagnosed through a mobile and agile techno-scientific artefact. Concerns about political geography and, indeed, time, became irrelevant. Like Truth-Spots, the kits made the diagnosis of AIDS “credible and applicable anywhere and everywhere” (Gieryn,

2002, p.113) and at any time: AIDS could now be diagnosed not only in the living, but, also, the dead. This ability to diagnose spatially and temporally gave the kit immense, epistemic and political power, especially when it was brought into Africa and used to substantiate the Afro-centric theory of the origin of AIDS that was emerging.

EXCAVATING COLONIAL GEOGRAPHIES AND BODIES: HIV-KITS AND THE OUT OF AFRICA THEORY

Euro-American scientists, particularly Project SIDA, began using the HIV-kit to screen historical blood samples (i.e., retrospective serological surveys) from Africa almost immediately after the kit was licensed; and it worth noting that these retrospective surveys were also taking place in the United States. Where did these samples come from? During the colonial period, as part of various Euro-American research projects, epidemiological programmes, and WHO-sponsored initiatives (the massive smallpox vaccination and eradication programmes of the 1950s, 1960s, and 1970s being a prime example), a huge collection of blood samples from Africans were transported to, and achieved and literally frozen in, European and American laboratory refrigerators. In the 1980s, these blood archives, and more recent samples taken from blood banks and screening programmes (particularly in Zaire via Project SIDA), were retrieved and screened for HIV. A number of these historical samples (the earliest of which were from the 1950s) were found to have HIV antibodies. Since these were the oldest, sero-positive samples at the time, a theory emerged that AIDS originated in Africa— specifically, Zaire, where these samples were derived. Through these artefacts, through these blood-samples, the colonial and post-colonial experience were brought together to construct a hybrid, scientific theory of AIDS origins.

Additionally, when the genome of HIV was examined, it was found to have much similarity with simian— that is, monkey—viruses found in Central Africa. With some considerable exceptions, the issue that generated much controversy was not the Out of Africa theory, per se; although there were Africans that were deeply suspicious of the theory, in principle, because they

viewed it as manifestly racist in its targeting of Africa (given that most, and the earliest, cases of AIDS were reported in America and Europe). A great deal of protests were directed at the hypothesis proposed to explain how a simian virus jumped from monkeys to humans; how this virus spread from Africans to Europeans; and why “African AIDS” was different than “Euro-American AIDS”.

AFRICANS AS A SOCIOCULTURAL OTHER AND THE OUT OF AFRICA THEORY : THE TRACES OF COLONIAL/TROPICAL MEDICINE

Many theories were proposed; but, increasingly, the sociocultural practices of Africans took thematic salience. Anthropological, sociological, and epidemiological studies of African sexual practices grew in volume and diversity. Research on African promiscuity (and its links to prostitution) and polygamy was especially common. Other research questions focused on African culinary habits, particularly on the hunting and eating of “bushmeat”; and, “traditional” rites of passage, such as circumcision and female infibulation, or any other “tribal” practice that involved blood or the exchange of bodily-fluid. As with Colonial/Tropical Medicine, medical problematisations of Africans were increasingly intertwined with sociological and anthropological typologies of the African as an exotic Other. A typical example, among many, is an article written by Daniel B. Hrdy in 1987. After summarising the socio-anthropological scholarship on African Otherness, he concludes by focusing on African promiscuity, the high rates of venereal diseases in Africa, as a distinguishing feature between Africans and their Euro-American counterparts; he was not alone in this; Dr. Krause made similar arguments. It was this sexual and sociocultural otherness that made “African AIDS” different from “Euro-American AIDS”. Accordingly, Daniel B. Hrdy notes:

Differences between the epidemiology of AIDS cases in Africa and that in Western societies have prompted speculation regarding risk factors that may be unique to Africa. Because of the age and sex distribution of AIDS cases in Africa, emphasis has been placed

on sexual transmission of human immunodeficiency virus (HIV). Factors thought to influence this sexual transmission include...promiscuity...cultural practices...(female “circumcision” and infibulation...medicinal bloodletting, rituals establishing "blood brotherhood," and possibly ritual and medicinal enemas...ritual scarification, group circumcision, genital tattooing, and shaving of body hair...contact with nonhuman primates. At the current time promiscuity seems to be the most important cultural factor contributing to the transmission of HIV in Africa...(Hrdy, 1987, p.1109)

Withstanding which mechanism or social cultural practice selected, the Afro-centric theory of AIDS was, by the mid-1980s, beginning to gain much traction, credibility, circulation, and acceptance by a large number of Euro-American scientists. The historical samples supported this theory; the genes of HIV validated it; African, sociocultural practices provided a plausible a mechanism of mutation and transmission; and HIV-kits provided a technique to make question of place and time irrelevant.

THE CONNECTION BETWEEN HAITI AND AFRICA IN THE OUT OF AFRICA THEORY

The theory was multi-sited, like the travel of Euro-American teams that were constructing it. Accordingly, Haiti was not taken out of the emerging theory. Instead, it was connected to it. Because Haitians had travelled and worked in Zaire in the 1960s and 1970s—as technicians and professionals recruited by the Zairian government to replace the mass exodus of Belgians after the dissolution of the Belgian, colonial empire— Haiti was linked to the Afro-centric theory. Instead of AIDS coming from the United States to Haiti, the theory now held that Haitians, from their travels to and from Zaire, introduced the AIDS-virus to the Western Hemisphere and Europe. This virus then travelled from Haiti to America through sexual tourism, as explained earlier. Summarising the theory, Richard Krause has put it this way in an interview:

...They [Haitians] have a tragic history, and because of this, large numbers of them in the 1960s had gone to Zaire as engineers, accountants, etc. When they were kicked out, some of them came back to Haiti, some of them came here and to Canada, and a few went to Europe. AIDS travelled with them from Africa...AIDS started in Africa, because of societal changes and urbanization. It had probably been confined and transmitted very sporadically in the rural communities...Since they have a lot of STD, something must have happened to the social barriers, and the diseases broke out. Certainly in recent times prostitution has flourished in the large urbanized cities of central Africa. (Krause, 1988)

HOW THE OUT OF AFRICA THEORY BECAME GLOBAL: CONFERENCES AND THE TRANSNATIONAL TRAVEL OF THE OUT OF AFRICA THEORY

At two international conferences held in 1985, the Out of Africa Theory was presented by Euro-American scientists. The first of such conferences was held in Atlanta, Georgia in June, 1985: the first International AIDS Conference organised by The International AIDS Society (IAS)). Sponsored by the World Health Organization and United States' Department of Health, and attended by close to 2000, Euro-American scientists with one African from Zaire, Project-SIDA scientists made the case for AIDS' African origin, to the shock of the only African that was present (Piot, 2012). In addition, six months later, the theory was again presented at the first, major international conference specifically dedicated to AIDS and Sub-Saharan Africa: "The International Symposium on African AIDS" in Brussels, Belgium. Organised by the Saint-Pierre University Hospital, Brussels (the source of the first published report of AIDS on Africans) and the Pasteur Institute, Paris (the centre that collaborated with the CDC to isolate HIV and construct the first HIV-screening kit), the International Symposium brought together some 700 Euro-American scientists at the Palais des Congres (Brussels Congress Centre). Africa by this time was becoming a transnational, project in its own right.

At this Symposium, 59 papers (that often cited Project SIDA's work) on a wide array of subject matter related to AIDS and Africa were presented, including a paper presented by Dr. Nathan Clumeck (one of the co-authors of the first publication of AIDS and Africa) on the "...The AIDS Epidemic and, Its African Connection" (Clumeck, 1985). Clumeck, following Dr. Krause and the International AIDS Conference, also made the case for AIDS' African origin.

Thus, the theory of AIDS being a post-colonial pathology emerged. Because of the dissolution of a European colonial empire in Africa, and the recruitment of Haitians to fill in the gap of technical expertise that resulted from this dissolution, AIDS travelled from one post-colonial geography to another until, because of geopolitical and economic relationships between postcolonial states and Metropoles, it became a global pathology, situated across multiple geographies and techno-scientific intersections.

AFRICAN REACTION AND RESISTANCE TO HIV/AIDS RESEARCH

What of Africans themselves? How did they translate and make sense of Project SIDA and Euro-American science? As with most questions related to techno science and Post-Coloniality, to speak of an "African reaction", as it were, is difficult and must be done with much caveat and reservations. There was not a homogeneous "African reaction" to speak of— if what is meant by a "reaction" is a totalising narrative or homogeneous voice. In the first chapter I highlighted the "messiness" and kaleidoscopic, eclectic, contradictory properties of Post-Coloniality. And, I also argued for this messiness to be embraced. The "African reaction" is a case in point. That is, what can be said about it, at best, is that the translations and readings of AIDS were mixed, geographically and temporally specific, and undoubtedly complex. However, the question of political and cultural geography, the questions of difference, the act of political remembering, the shadow of colonial experience, punctuated and "tinged" much discourse and resistance. In addition, a great part of the resistance was not just targeted at ideas, but, also, material

artefacts: HIV-kits, as techno-scientific objects and carriers Euro-American knowledge. Here are some indicative moments of resistance and translation.

African governments and medical/scientific communities, initially, cooperated with Euro-American scientists in their research programmes, as suggested by Project SIDA. Thus, some, such as with Zaire, were particularly active. However, for the most part, African governments and scientific communities were, if not silent, then minimally interested in Euro-American research in Africa before the Out of Africa Theory was formulated and reported in the lay-press; it is hard to find public comments from African governments about AIDS research before 1984-1985. Like many other governments, and a considerable body public and scientific opinion in the early 1980s, AIDS was widely perceived as an American and European pathology; as a pathology of groups at the periphery of hegemonic, Euro-American notions of normalcy; in other words, the homosexual community (especially), drug-abusers, and those of lower-socio-economic status.

However, when the Out of Africa Theory started being publicized in Euro-American press and media, particularly by international broadcasters and major newspapers, voices of resistance started being heard more loudly, including from places that previously and actively supported Euro-American research. Protestations focused on two areas: firstly, the reliability and specificity of HIV-screening kits; and, secondly and more thematically, the representations of Africans as Other in socio-anthropological literature.

THE DIFFICULTY OF ACCURATELY DETECTING HIV IN AFRICA AND AFRICAN BLOOD: HIV-KITS, DIFFERENCE, AND FAILURES OF TRANSLATION

In terms of the first, one of the main issues that arose in respect to HIV-screening in Africa was the apparent difficulty and incapacity of HIV-kits to precisely detect HIV antibodies in Africans. In the previous section, I noted how the “Out of Africa Theory” grew out of the screening of historical blood-samples and described the ways these results were used to place the

origin of AIDS, or the AIDS-virus, in Africa. However, many of these early results came to be challenged (not just by Africans, but also, by many Euro-American scientists). The problem was the apparent lack of sensitivity and specificity of the kits; the difficulty sero-epidemiologists were noticing and reporting when it came to screening African blood: mainly, the high-rates of, what is called in bio-chemical engineering and sero-epidemiology, “false-positives”; that is, sero-positive results in the absence of HIV infection or the presence of tropical pathogens.

The reason given was the bio-physical and geo-physical difference of Africans and Africa, respectively. That is, the biology of Africans and tropical pathogens and pathologies in Africa. Apparently, Africans had different, “sticky” blood from Europeans and, because of tropical, parasitic infections (e.g., malaria), the kits were mis-reading HIV. The kits—the producers of placeless, Thing-Knowledge—were, seemingly, failing to translate African difference. As one sero-epidemiologist noted, in his review of previous studies, in 1987:

Initial sero-epidemiological surveys in Kenya and Uganda reported prevalence data as high as 79% in rural people. However, these were almost entirely false-positive results caused by non-specifically “sticky” antibodies (usually Igm) often found in the blood of Africans, possibly as result of repeated parasitic infections.... (Nunn, 1987, p.5)

Euro-American scientists reacted to these geo and bio-specific differences by introducing and deploying more and diverse confirmatory techniques and kits. And, by the late 1980s, Afrocentric kits were constructed. It appears that the “stickiness” problem was an effect of the existence of different, geo-specific strains of HIV first detected as “abnormal profiles” in screening done in Cameroon and Central Africa. Accordingly, a transnational network of Euro-American, African scientists (including many Cameroonians trained by the Centre Pasteur du Cameroun (CPC), Yaounde) isolated and built a new kit.

In this sense, the kits subsumed African resistance and brought it within its domain; it took the discourse of African Otherness and materialised it in a new, techno-scientific artefact; an object that accepted African difference while simultaneously erasing it by incorporating it in Euro-American knowledge. That is, the geo-specific African kits recognised African HIV and “sticky blood” as Other, but it also provided a technique for this Otherness to be incorporated in Euro-American, sero-epidemiological screening programmes (as we shall see below). Like the use of Truth-Spots, it provided a technique to bracket or dim—but not silence—the significance of geography in the construction of knowledge.

LINGERING FRICTION OF POLITICAL GEOGRAPHY AND HIV-KITS

Despite these developments, HIV-kits continued to be the target of some resistance and challenge; especially when reports of the initial misreadings were reported in the lay-press. The kits were accused of being designed with Euro-American populations and geographies in mind. Accordingly, the argument went, the kits were incapable of incorporating and/or translating African Otherness adequately; AIDS, clinically, and HIV-kits, sero-epidemiologically, were a foreign Euro-American pathology. In this sense, it was Africans, deploying their Otherness as a technique of resistance, as an attempt to open the “black-box” that was HIV-kits.

Besides the kits, other commentators attacked the practice of Euro-American diagnosing AIDS on Africans, in principle. Making many of the points that Philippa Levine (Levine, 2003) made about the diagnosis of venereal diseases during the colonial period (as noted in previous chapter), they argued (most especially Richard and Rosalind Chirimuuta) the Euro-American, medical gaze could not be divorced from its tinge of racism; from its lack of capacity to see Africa and/or Africans on their own terms. The question of difference made universal, diagnosis impossible as Richard and Rosalind Chirimuuta explained:

The reliability of the diagnosis of AIDS in...African patients has been questioned by doctors who have argued that the symptoms and the signs of a number of diseases common in the Tropics may have been confused with those AIDS... a number of diseases that occur in tropical countries..., including visceral leishmaniasis (Kala Azar) and African trypanosomiasis (sleeping sickness) present with fever, weight loss, skin rashes and lymphadenopathy, common symptoms of AIDS....American and European doctors, prejudiced from recent experience of cases of AIDS in their own country and unfamiliar with tropical diseases could, without too much difficulty, reach the wrong diagnosis conclusions(Chirimuuta & Chirimuuta, 1987, pp. 344-346).

However, much of the protests were not directed at HIV-kits, per se, or the diagnosis of AIDS in Africa (the Bangui Definition had already established geo-specific definitions and translations of AIDS in Africa); it was the involvement of sociologists and anthropologists in the Out of Africa that generated a huge amount of resistance and commentary.

AFRICAN RESISTANCE TO THE OUT OF AFRICA THEORY : SOCIOCULTURAL DIFFERENCE, AIDS, AND THE OTHERING OF AFRICANS

Despite African protests, the kits remained resilient against attacks levelled at it; and, as will be described below, their use in Africa spread. Instead, a great deal of protests were on the socio-anthropology studies that sought to associate African, sexual practices, culinary habits, and, generally, culture, to the Out of Africa Theory, broadly, or to claims that “African AIDS” was somehow different and more dangerous than “Euro-American AIDS”. The targets of protests were not always the actual, academic and scientific publications themselves, but their mediation and reporting in the lay press; especially the headlines that often accompanied the articles. As with the Haitian reaction in 1982 when Haitians were listed as a “risk factor” for AIDS and excluded from donating blood in the United States, the African protests were, in essence, about the

“labelling issue” or, more precisely, the “blaming issue” (Sabatier, 1988). That is to say, a sense that Africans were being unjustly targeted and a belief that scientific knowledge, especially the Out of Africa Theory, was coloured by racism. A typical example can be seen in a letter written by an African physician to the *Lancet*:

The Central African theory leaves a lot of questions unanswered, people in Central Africa have been living close to monkeys and other game since their existence. Why did the virus decide to jump across the Atlantic to attract the Americans and not the Zaireans? Or is the virus a racist?...Most people, especially Africans will have realized that the Western media has engaged in a deliberate and calculated propaganda to lay this "white man's burden" on Africans as usual. What is most disturbing is to see an African falling prey to this propaganda. (Wiki, 1986, p. 6)

Others made direct connections between the Out of Africa Theory and previous colonial experience; that is, the experience of Colonial/Tropical Medicine. They argued the Out of Africa Theory was a continuation of colonial practice and that Euro-American techno-science (including HIV-test kits) was merely another “Tool of Empire”, as it were; another technique of Neo-Coloniality, informed by racial notions of African difference. The “traces...marks, residues or remnants left in place by [colonial life]” (Anderson, 2010) we’re resurfacing and being deployed as a political narrative and act of political remembering. Richard and Rosalind Chirimuuta articulated this sentiment explicitly and most poignantly. In this excerpt they provide their racialised historiography and narrative of Euro-American science in Africa. Accusing Euro-American science of racism, they wrote in 1987 in their most controversial book *AIDS, Africa, and Racism*:

...With a single-mindedness of purpose doctors from the West arrived in Africa and set about their task...to prove the disease that originated in Africa they fetched old blood samples collected on previous safaris from the bottom of their freezers, and subjected them to...unreliable tests... This activity was not motivated by a genuine

concern of Africa... Racism, not science, motivated the search for the origin of AIDS...the AIDS researchers, the medical “experts”, the media and the public at large are affected by insidious and frequently unrecognised disease of racism.... (Chirimuuta & Chirimuuta, 1987, pp. 344-346).

In addition, in its survey of the African reaction to Out of Africa Theory, and its reporting in the Euro-American press, the Panos Institute noted in 1988 that:

Condemnation of Western reporting on AIDS has appeared through the African press, with articles which discuss promiscuity drawing particularly acid responses...African journalists hit back. Western reporting on AIDS was a “campaign of systematic denigration against black Africa” said the Cameroon newspaper *La Gazette* in August 1987; “it deliberately encourages racism and reinforces racist ideologies”, said Ivory Coast newspaper, *Fraternite-Martin* in August 1987. *New Vision* in Uganda referred to “Western escapism and racist hang-ups”. (Sabatier, 1988, pp.40-50).

The idea that AIDS started in Africa was repeatedly denounced: as Lt-Col Abdul Mumini Aminu, governor of the Nigerian state of Borno, said at the time, it was reminiscent of a “colonial mentality which capitalises on our weakness and underdevelopment to attribute everything that is bad and negative to the so-called dark continent” (Sabatier, 1988). In some quarters, African reaction took its own form of xenophobic othering. Arguing that AIDS was foreign pathology of Euro-American deviance — by which they typically meant homosexuality, which was caricatured as effeminate and “Un-African”—, they problematized and presented Europeans as a bio-political risk to Africans. Thus, Panos reported that in the “street” of African cities, the following reactions were heard:

...“It is the white who brought this disease. Just look at the way some of them want to sleep with their fellow men and Zambian boys”... “before the white man came an African had a pure sex life. But then they brought their so-called civilisation, their big hotels where they practice their immorality”...”I will never go to bed with a white man unless he wears a condom. As far as I’m concerned, AIDS is a white man’s disease”...”this AIDS scare is a lie put about by whites to prevent use Africans from having as many children as we want”... (Sabatier, 1988, pp.88-90).

This conspiratorial turn reached extreme degrees. As an example: in the late 1980s, a theory, of unclear origin but probably from East Germany, started circulating in African newspapers. It held that AIDS was a biological weapon intentionally designed by the American intelligence community to target Africans. The lines between science and politics in these conspiratorial translations became undistinguishable. The grand narrative of hyper-Neo-Coloniality subsumed all else. How widely held these views were is, of course, unknowable and difficult to access. Nevertheless, in describing the circulation and prominence of the theory in the African press, Panos reported how:

...in September 1986, during the summit of the Non-Aligned Movement in Harare, Zimbabwe, a Zimbabwean magazine published an article based on...East German claims entitled “AIDS: USA homemade evil; not imported from Africa”. A month later a Nigerian news journal published an unsigned review of the East German paper stressing that “remarkable correlation between the establishment of the first military institution to gene manipulation of viruses in 1977, and the first registered cases of AIDS in New York”. ...A Ghanaian daily newspaper in April 1987 charged US medical personnel were conducting “intensive experiments” with the AIDS virus in Zaire, Argentina, and Pakistan... (Sabatier, 1988, *ibid.*).

MULTIPLE TRANSLATIONS AND GEOGRAPHIES OF READING

These views were not, undoubtedly, held by all. The ‘geographies of reading’ at regional, national, and sub-national scales were many and diverse. And, it is worth highlighting that even after the Out of Africa Theory, a number of African governments and medical communities, noticeably in Uganda, Senegal, Zimbabwe, Cameroon, and, eventually, Kenya, expanded their cooperation and partnerships with Euro-American scientists; most especially with Project SIDA. The Ugandan president famously called African governments that refused to establish national AIDS programmes “backwards”. And, Uganda opened its doors to Euro-American research; its physicians and scientists worked in partnership with their European counterparts; its government open the country to the often intrusive and problematic gaze of the Euro-American media; and it, along with Zaire, led the way in establishing the first, major, national AIDS-prevention campaigns in Africa (with much technical and financial support from Euro-American states and what came to be UNAIDS).

In addition, some African scientists and journalists expressed concerns about this “the blame game”. They argued that the multiple translations of AIDS was making it difficult for African scientists and policymakers to engage and/or evaluate the potentially, serious, epidemiological risks that HIV/AIDS posed to African populations. That is, the question of AIDS and Africa had become so entangled with questions of race and colonial remembering that separating science from political geography had become impossible or, at least, difficult to realise. As Otula Owuor, science correspondent for the Kenyan Daily Nation, reported in the context of Kenya: “... “The principal effect...has been to arouse the suspicion that AIDS does not even exist in Kenya. This makes my job more difficult. If we write about AIDS, people think we are exaggerating. If we don’t, they think we are covering up” Sabatier, 1988, p.100). Another Kenyan journalist, Hilary Ng’weno, also mentioned how: “To Africans there is more than a good racism in much of this” and that “International press coverage was getting African’s backs up...” and

time and effort was “being wasted in attempts to refute the wild claims of some reports on AIDS in Africa instead of taking the necessary countermeasure against the disease. (Sabatier, 1988, *ibid.*)

SUMMARY: CONTESTING AIDS AND THE SHADOW OF COLONIAL EXPERIENCE

The reading, translation, and contestation of AIDS in Africa was various, messy, complex, and, in some ways, full of contradictions. However, the question of difference and colonial experience was central. It was the problematic that everyone had to engage with. Whether it was African governments that supported Euro-American research, or it was those that contested it, or it was Euro-American scientists working in Africa, the colonial issue was something that needed to be negotiated and confronted. That fact that Euro-American research increasingly focused on African, sociocultural practices pushed questions about colonialism and difference to the forefront.

For, as we saw in Chapter One, the links between anthropology (and its imaginaries of Africans as an exotic Other) and Euro-American, scientific interventions in Africa during the colonial period often blurred the lines between “Science” and geo-politics, between science and sociocultural commentary. In the case of AIDS-research in the 1980s, the involvement of socio-anthropology in the Out of Africa theory had a similar effect: the boundaries between science and Euro-American, cultural notions of African “promiscuity” and sociocultural difference became fussy, especially in the gaze of those that read this Euro-American knowledge with an eye to the past and socio-memories and narratives of colonial experience and trauma. And, the mediation of scientist knowledge through the lay press and media, which often translated this knowledge for a different audiences and purposes, intertwined scientific knowledge with social and geo-political judgement.

PART THREE: THE IMPORTANCE OF HIV/AIDS KITS IN MAKING HIV/AIDS IN AFRICA VISIBLE AND GLOBAL

Part Three concentrates on how the problem of political geography was negotiated or bracketed through “Thing-Knowledge”, or HIV-blood kits, and the way that knowledge generated by these kits was deployed to sero-epidemiologically map African geographies and construct a transnational, epistemic community and policy network around HIV/AIDS and its relationship with Africa. This part is important as it is a bridge—or, rather, a question—that is returned to in the following chapters: specifically, Chapters five and six when the question of access to treatment and the production and importation of generic HIV/AIDS into Africa is examined.

THING KNOWLEDGE AND THE BUILDING OF A TRANSNATIONAL EPISTEMIC COMMUNITY: UNAIDS AND THE HIV/AIDS SURVEILLANCE DATABASE

In this section, the way that knowledge derived from HIV-tests (Thing-Knowledge) was deployed to construct a new cartography of Africa, and establish and stabilise a Euro-American, transnational epistemic-community around Africa is examined. In addition, it looks at how HIV-tests were used to bracket questions of African resistance and represent AIDS as placeless. That is, it will look at how HIV-kits constructed or established Africa as a space for and of Euro-American intervention.

MAPPING AFRICA THROUGH THING KNOWLEDGE: HIV SCREENING PROGRAMMES IN AFRICA

Despite African resistance and protests, the 1980s witnessed a massive expansion of Euro-American research in Africa. HIV-screening kits were fundamental in this expansion (Ronald, et al., 1988; Hunter, 1993; Karim, et al., 1998). Before the advent of HIV-kits, as already seen, AIDS

was a complicated diagnostics to make. When studied or diagnosed in the tropics, the problem of separating local differences from universal diagnostics was pervasive and hard to overcome.

However, with the kits, AIDS became instrumental and more mobile and agile. It travelled more quickly and easily. Its diagnosis, at least for epidemiological purposes, became possible through a single artefact and actant. Place mattered less and less. The important thing was the knowledge and ontological claims it generated. The kits reduced the complexity of AIDS, lowered the amount of effort and technical resources required to construct it, and routinized and standardised diagnosis to a degree of “push button simplicity” (Baird, 2004). Any laboratory technician with a little bit of training and, of course, the financial means to purchase the tests, could be taught how to use it. AIDS could now be diagnosed anywhere and everywhere and on anyone. All that was needed was a body, a blood sample. The world and social spaces that could be made subject to epistemic, ontological, and institutional claims it “black-boxed” expanded.

Thus in the 1980s, a huge number of Euro-American scientists went to Africa. HIV screening programmes, including many by Project SIDA, were established in very many African countries, especially in those Central African states that had taken an open-door policy to Euro-American, AIDS research. Whereas previous interest had been in historical, colonial samples, the screening programmes of late 1980s targeted what was called “at risk groups”: mainly, commercial sex workers and transnational lorry drivers. However, screening quickly expanded beyond those groups. Pregnant women at antenatal clinics became a main subject of “routine” epidemiological surveillance; they were automatically “opted in” screening programmes and complex ethical debates over this practice were immediately recognised. They became a barometer of HIV prevalence in many countries. Soon, schoolchildren and civil servants, especially those in the army and medical profession, were added to the list. HIV-screening programmes reached industrial scales (Ronald, et al., 1988; Hunter, 1993; Karim, et al., 1998; Rennie, 2006; Weiser, et al., 2006). The growth in sero-epidemiological screening was impressive, indeed.

THE HIV/AIDS SURVEILLANCE DATABASE AND THE ARCHIVING OF THING-KNOWLEDGE

In 1987, the proliferation of screening programmes in Africa had reached such a scale that the United States Census Bureau established a database, specifically and solely dedicated to Africa, to archive and disseminate the growing volume of scholarship in this area (a great deal of which came from Project SIDA); The Bureau also started constructing epistemological projections and maps of Africa based upon HIV prevalence. These projections and maps were brought together in HIV Country Profiles; sero-epidemiological data about the incidence and prevalence of HIV in all African countries where sero-epidemiological screening was taking place (Center for International Research (U.S.). Health Studies Branch, 1993). They were published and updated periodically, distributed internationally, and the database became an important source of information for American agencies and it became, importantly, a reference point for the global epistemic community that was rapidly growing around Africa and its relationship to HIV/AIDS. The database and Country Profiles were reproduced and cited in various and many publications, conferences and workshop presentations, policy documents, media reports, etc. (Center for International Research (U.S.). Health Studies Branch, 1993) The publications of the database, like the knowledge generated by HIV kits, became important actants in construction of AIDS in Africa.

From barely being studied in the early 1980s, from the time when Project SIDA struggled to have its papers accepted for publication, HIV-kits brought Africa into the centre of global, or more precisely, Euro-American, imaginaries of AIDS. These kits were not just “instruments”, they were objects of great epistemic and ontological significance; sociocultural actants and fields in their own right. By the late 1980s, it became increasingly impossible to speak about AIDS without mentioning Africa and its “AIDS Problem”. The Census Bureaus’ Country Profiles and pathological cartographies placed Africa at centre of the emerging global problematisation or conceptualisation of HIV/AIDS in the late 1980s. Besides some, in the fringes of Euro-American

science, and some African scientists that continued to question the reliability and specificity of HIV-tests in tropical environments, the knowledge generated by HIV kits were widely and unquestionably accepted by the Euro-American, techno-scientific community (even if the ethics and effects of HIV screening programmes were the subject of much debate and contestation, not just in Africa, but in Europe and America).

THE ESTABLISHMENT OF AN EPISTEMIC COMMUNITY: THE WHO SPECIAL AIDS PROGRAMME AND UNAIDS

While the database was being compiled and its content distributed, senior members of Project SIDA started calling for a global AIDS-program to be established at the World Health Organisation (Mann, 1986). This call was informed by what was already happening in Europe: In 1987 and 1988 the regional, European Office of the WHO established its own HIV/AIDS programme (Fineberg, et al., 1992); collaborative networks of laboratories and research institutes were formed, epidemiological definitions of AIDS and techniques of diagnosis were standardised, regulatory bodies collaborated on prevention and epistemological surveillance programmes, funding was provided for HIV/AIDS research, and etc. Project SIDA supervisors called for a similar programme to be established for Africa.

Relying on the Census Bureau's Database and Country Profiles, members of Project SIDA lobbied, extensively, the WHO and Euro-American states—the Donor Community—to fund an African AIDS programme. The maps, profiles, statistics, and reports of the Database, the team argued, made Africa's pathological state visible for all to see. These maps, these artefacts, were not just passive technicality. They posed moral and political questions. The maps demanded action, the statistics called for intervention. However, the team faced much resistance and opposition from within the WHO; senior members of the WHO, especially its Secretary General and Health Ministers at the WHO's Regional African Office, placed AIDS at the bottom the health-priorities of African states (Mann, et al., 1992; Fee, et al., 2008).

In addition, despite the many screening programmes that existed in Africa, a number of African states continued to refuse to collaborate with Euro-American scientists. They were, apparently, fearful of giving them more excuses or pretexts to further blame and label Africans (much like the case in Haiti in the early 1980s). As with Haiti, an added motive was, probably, an objective to protect tourist-sensitive sectors from the negative publicity that Africa countries were getting from the Euro-American media. Representations of Africa as a place and origin of deadly diseases did not look good for national, tourism boards.

Despite this external and internal opposition, Project SIDA members continued to lobby for an African HIV/AIDS programme. By the early 1990s, a “Special WHO Programme” on Africa was formed (Fee, et al., 2008). However, without internal support and financing, the special programme survived by the strength of its fund-raising efforts. Even without this internal support, the Programme grew rapidly; even if it was significantly and comparatively small when viewed against its European counterpart. Yet, by successfully nesting and embedding its own initiatives and discourses to those of existing United Nations Agency initiatives and operations in Africa, the Special Programme successfully problematised Africa's “HIV/AIDS Problem” across a wide range of policy issues not restricted to health, but touching on everything from education, drugs control, economic development, security, human rights, gender, labour rights, immigration, demography, and etc. (Mann, et al., 1992; Whiteford, 2000).

Thus, by the late 1990s its operations had grown by such a measure and was touching on so many policy areas that the United Nations amalgamated and centralised all UN-related work under one umbrella: the Joint United Nations Programme on HIV/AIDS (UNAIDS), which had as its co-sponsors, to suggest the breadth of subject matter covered, The Office of the United Nations High Commissioner for Refugees (UNHCR); United Nations Children's Fund (UNICEF); World Food Programme (WFP); United Nations Development Programme (UNDP); International Labour Organization (ILO); United Nations Educational, Scientific and Cultural Organization

(UNESCO); United Nations Population Fund (UNFPA); United Nations Office on Drugs and Crime (UNODC); World Health Organization (WHO), and etc. (Whiteford, 2000).

SUMMARY: HIV-TESTS, THING-KNOWLEDGE, AND THE PLACING OF AFRICA

Thus, the availability of HIV-screening kits was fundamental in placing Africa at the centre of Euro-American imaginaries of HIV/AIDS. The kits permitted AIDS to become a more mobile and agile, epistemic object. It black-boxed AIDS and permitted the representation of AIDS as placeless “Thing-Knowledge”; as knowledge not limited by the friction of place and geography; all peoples and places could be brought and subsumed under its domain, into its epistemic and ontological world. The capacity to resist and challenge it, the ability to open the black-box or database, became harder and more complex. Contestation, wherever it came from, had to speak the language of the kits; had to make reference to the geographies and classifications it constructed. The traces and remnants of Coloniality were pushed at the periphery.

The kits made AIDS stable and placeless enough for a transnational, epistemic community to grow around it and it made it possible for Africa to be incorporated into the global, epistemic, regulatory project that AIDS became by late 1980s and early 1990s. However, as we shall see in the following chapters, the idea of African difference never went away; the shadow of the colonial past continued to hover over this global project.

CONCLUSION

The travel of scientific knowledge about AIDS from the United States and Europe to Africa was influenced by two main factors: the “thick”, laboratory - intensive nature of AIDS diagnosis and, secondly, the effects of the colonial past. To put it in more theoretical terms, it was affected by the need to diagnose AIDS through Truth-Spots, and by coloniality and the multiple

geographic readings and translations given to scientific knowledge because of it and its effects in post-colonial life.

Before the isolation of HIV and the licensing of the first HIV blood screening kit in 1985, AIDS was a heavy and laboratory-intensive medical artefact and diagnosis to construct. To diagnose AIDS, one not only needed a multitude of laboratory tests, but many more to exclude other pathologies with AIDS-like properties or symptoms. Although clinical judgments played a major role in diagnostics, the laboratory - intensive nature of AIDS meant it could not easily travel. For places that lacked laboratories, such as in Haiti and many countries in Africa, the diagnosis of AIDS was a complicated matter. Diagnosis was largely based on clinical observation, vulnerable to accusations of subjectivity and lack of extrapolative significance or relevance outside of the localised place of its occurrence. Because clinical observations did not rely on Truth-Spots, they lacked a presumption of universal equivalence or reliability; they could not be trusted or treated “as if” they were placeless. After the isolation of HIV and the licensing of HIV blood screening kits, however, AIDS became more mobile and agile. The possibility of "diagnosing" AIDS through a blood test, made the kits, not clinical observations and judgments, the principal objects of attention; the knowledge that they produced, the status of seropositivity or seronegativity they designated, held immense, epistemic significance, making issues about place almost irrelevant. The kits changed the focus away from Truth-Spots and laboratories to Thing-Knowledge. AIDS could now be diagnosed potentially everywhere and on anyone. Through sero-epidemiological programmes, AIDS—or rather HIV—was diagnosed and mapped in various and many peoples and places in Africa. Where diagnosis took place did not matter, the important thing was that it took place through kits. The stability and mobility provided by the kits allowed Africa, it facilitated knowledge claims made in the continent, to be incorporated into global, epistemic and institutional projects such as UNAIDS. The kits made it possible for scientific and medical knowledge constructed in Africa to be treated as if it was universal and placeless.

The travel of scientific knowledge about HIV / AIDS to Africa was, however, subject to multiple geographies of reading, influenced and coloured by the effects of the colonial past. Because medicine and science were deployed as a tool or technique of empire, which was deeply intertwined with racialised discourses and representations of Africans as Other, the travel of scientific knowledge about AIDS to Africa (and before that Haiti) was mired by suspicion. Many read European and American claims about AIDS as a form of neo-coloniality, tinged with the racism of the colonial past. The "Out of Africa" theory of AIDS particularly caused much contestation; it linked the emergence of AIDS to the perceived otherness of African sociocultural life—specifically, African culinary habits, such as the eating of bushmeat, and African sexuality, such as claims that Africans possessed an unusual, proclivity towards promiscuity. The theory was represented as an attempt to deploy racist imaginaries or caricatures of Africans to blame them, and their otherness, for causing a global pandemic. Many African communities contested and resisted this theory. Many African states refused to cooperate with Americans and European, sero-epidemiological programmes, fearing that (as Haiti before them) cooperation would be perceived as collaboration with neo-colonial practices.

Despite African contestations, HIV blood screening kits made it possible for discourses around neocoloniality to be suspended. It oriented all, if not much, epistemic and discussion towards the internal logic of its own form and means of knowledge construction: Thing-Knowledge. The kits affirmed, reinforced, substantiated, and "black-boxed" European and American knowledge about HIV / AIDS in Africa. They permitted a global, epistemic community and policy network to grow around HIV / AIDS in Africa, establishing a global, institutional and structural regime, and making Africans readings of AIDS almost completely peripheral—in an epistemic and geopolitical sense.

**CHAPTER FOUR: GLOBAL PATENT GOVERNANCE IN COLONIAL
AFRICA AND POSTCOLONIAL STRUGGLES OVER PATENT LAW**

Having shown how scientific knowledge about HIV / AIDS travelled to Africa in the previous chapter, and examined African readings and contestations of this knowledge, the following chapters, beginning with this one, will focus on the global, legal and regulatory response to HIV/AIDS in Africa after the establishment of Project SIDA and UNAIDS. In other words, the move is away from the first research question of the thesis (on the history, movement, and readings of scientific knowledge about HIV/ AIDS in Africa) and towards the interrelated, second and third research questions: on the global response to HIV / AIDS in Africa and the geopolitics and political economy debate about access to, the local production and importation of, generic HIV / AIDS drugs in Africa—especially, the intersection between this global response and the colonial past. Two main regulatory and legal interventions, or global responses, will preoccupy these chapters, mainly: transnational patent governance (the focus of the next chapter) and pharmaceutical regulation (the subject matter of chapter six).

However, to situate these regulatory responses, especially with respect to transnational patent governance, it is important to place debates about patents, access to, and the local production and importation of, HIV/AIDS drugs in Africa in a historical context. That is, before looking at how, for example, the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) influenced the global response to HIV/AIDS in Africa (as is done in the next chapter), it is worth first explaining how patents came to be in Africa in the first place, and how Africa came to be incorporated in a global, patent regime that became such a major, thematic issue in great many discourses, policy discussions, and contestations about access to and the multi-lateral procurement of HIV/AIDS drugs in the early and mid-2000s (as explained in chapter five and six). Accordingly, although this chapter digresses from the specific issue of HIV/AIDS, such a digression is necessary to provide a historical and geo-political context for the many regulatory and governance issues that are tackled in the following chapters. The current chapter situates these issues—as a form of geo-political and post-colonial struggle—in place and time.

Thus, this chapter examines the travel of European patent law to Africa and the incorporation of African colonies within the transnational patent regime that emerged in the late 19th century an early 20th century. It then explores how post-colonial African states confronted, negotiated, and sought to challenge and reform this regime from the 1960s to 1980s before the coming into force of the TRIPS agreement in the 1990s.

The theoretical interest of the chapter is on coloniality, post-coloniality, and legal geography, which are unpacked in three ways: the construction of colonial patent regimes; the effects and traces of these regimes on postcolonial readings and contestations of patents in Africa; and the different ways that territoriality, as a geo-legal technique and aspect of sovereignty, was deployed to both transplant patent law in Africa and to subsequently contest and translate it within the context of postcoloniality.

The chapter is divided into three parts. In the first part, it examines how patent law was implanted into Africa as part of the colonization process and the way Africa was incorporated into the transnational, European patent regime of the 19th century. Moreover, building from the last chapter, it analyses the different geographies of reading—in this case, the different readings of law, specifically the concept of patents and its relationship to the doctrine of territorial sovereignty. It shows how, in Europe, the doctrine was used in juridical discourses to theorise and justify the power of the state to grant patents (territorial monopolies) and to place limits on the extraterritorial potential and reach of the transnational patent regime that was constituted in the late 19th century. This European context is compared to the case of the colonies, where colonial peoples were not only denied sovereignty, but also made subject to colonial patent laws and the extraterritorial reach of a transnational patent system they had no, or very little, contribution in its formation. The second part begins by describing attempts by postcolonial, African states to industrialise and use patents as a tool to realise this objective. It then situates this objective within a wider campaign by postcolonial governments around the world from the 1960s to reconfigure and reform, and indeed

build a new, international economic and legal order they inherited from the colonial past. It finishes by describing the various, national and regional, patent regimes that African states instituted and examines how the colonial past and the commercial interests of Euro-American states influenced them. The third part sets out the discourses, geopolitical context, and political economy within which the TRIPS agreement emerged in the 1990s, mainly: the use of patents in techno-nationalist programmes of industrialisation in the Global South and the transnational, commercial rivalry between Euro-American and Asian manufacturers, competing over the global market for high-technology products. Its final sections deal with commercial diplomacy, the drafting history of TRIPS, and the role that Euro-American commercial networks played in this process. Specific provisions of the agreement are then examined; the extent to which TRIPS divorced the doctrine of territorial sovereignty from transnational patent governance is explored and situated within the wider campaign by postcolonial states to expand and reinforce the doctrine as a central principle of patent governance through the promotion of such geo-legal techniques as local working requirements and compulsory licenses.

The chapter argues that the travel of patent law to Africa was intimately tied to the colonisation project and its dynamics of difference—the denial of African sovereignty. And it contends that postcolonial, African readings of patent law, and their campaign to reform the Paris Convention, was part of geopolitical struggle to (re)claim equal standing with European states, demand compensation and restitution for the harm and trauma that they suffered as a result of colonisation, and assert their sovereign and territorial rights over their political and sociocultural life.

PART ONE: THE COLONIAL HISTORY OF PATENT LAW IN AFRICA: EXTRATERRITORIALITY, RACE, AND GEO-CULTURAL DIFFERENCE

This section describes how patents are connected to the doctrine of territorial sovereignty, to the exercise sovereign power and jurisdiction over peoples, places, and social cultural practices

that take place with its territory (the principle of territoriality). It then shows how this principle was deployed as a technique in the transnational patent regime that emerged in Europe in the 19th century to limit the regime's extraterritorial scope and provide European states with the discretion to set out which subject matter was patentable, which local working requirements would be needed, before foreign patent rights and claims would be protected under the domestic laws of European members of the regime.

THE CONNECTION BETWEEN PATENTS, SOVEREIGNTY, AND THE PRINCIPLE OF TERRITORIALITY

The granting by States or monarchs of monopolistic, commercial privileges and the practice of States/monarchies protecting certain technical knowledge from public disclosure (especially to foreigners) has a long and complex heritage; this practice is possibly as old as City-States and Empires of ancient Mesopotamia and is not, therefore, an uniquely Europe practice (Richards & Buren, 2000). It is a very old and common technique and basic “kit” of statecraft the world over. Patents, however, are different. That is say, the practice of a State protecting specific ideas or “inventions” as a form of “property” owned by an individual, not the state or “society” or the community at large, is a peculiar, European construction, deeply tied to the concept of sovereignty and its spatial extensions.

From its very beginning in the Italian peninsular in 15th century, and it’s very gradual spread to the rest of Europe in the 18th and 19th century (when it faced a threat of complete rejection (Machlup & Penrose, 1950)), patents have always been a geo-legal and regulatory technique. To grant a patent—that is to say, a state-sanctioned monopoly—over an idea or invention, and the right use it and exclude others from its use, has always been spatially circumscribed. That is say, to subject to the “territoriality principle” (Dahrendorf, 2010; Peukert, 2011). The state-guarantee of monopoly extends only to spaces and subjects (the third parties against whom the State must enforce its writ) over which it has control and jurisdiction. Put

another way, patents are only as good and secure as the state that grants and agrees guarantee their enforcement. They are a promise of protection for a given time over a given space. In and of itself, the grant of a patent does not bind other sovereignty states.

Thus, in the 16th to 18th century in Europe, “letters patent” were typically understood as part of the exclusive jurisdiction and sovereign exercise of the “Royal Prerogative.” So, in tracing the evolution of English patent law in the 16th and 19th century (which formed the basis of American patent law as it travelled there through colonialism in 16th and 17th century), Oren Bracha notes that:

The essence of sixteenth and seventeenth century English patents was being an instrument for the exercise of royal prerogative power. As a matter of technical classification, patents were one category among others of the devices at the disposal of the king for ruling his realm. The term “Letters Patent” (“*litterae patentēs*”) referred to grants of different kinds that were made by the king through an open official document, which was addressed to the public (as opposed to sealed closed documents- “*litterae clausae*”). “Letters patent” was the name of this kind of official documents and as a derivable usage the general name of the administrative channel for conferring privileges and exercising royal power... (Bracha, 2005, p.9)

Hence, although patents are typically represented as a form of “private” property or “right,” they are, at their core, a performative speech act by a sovereign power to guarantee, secure, and enforce the terms of an agreement between it and another person over a given space it claims jurisdiction and/or sovereign authority to act. In this way, patents can be better understood as an application to receive a privileged status through the exercise sovereign power; and this explain why much of the governance and regulation of patents do not typically fall under property law, but antitrust or competition law: that is to say, concerns over the abuse and manipulation of dominant positions and market power. Patents live and die with sovereignty.

THE PARIS CONVENTION AND THE LIMITATIONS OF EXTRATERRITORIALITY

Accordingly, until the 19th century, patent regimes in Europe and America were national and “local affairs.” Starting slowly in the 17th century and 18th century (when few States, such as Britain and France established patent regimes) and growing rapidly in the 19th century (when a great many European States joined the patent club), European States established their own patent regimes, promising to only guarantee the validity and security of patents granted by themselves and, generally, their own nationals. Although foreigners were granted patents, their “rights” were often bracketed; they were completely not recognised or had various legal-disabilities placed upon them. There were no “transnational” patent law to speak of, only, possibly, bilateral agreements among individual States, promising to only recognise the laws and protect the patent rights of each other’s nationals (under the principles of reciprocity, mutual recognition, and national treatment); for example, by 1883, there were at least 69 bilateral agreements, the majority of which dealt with trademarks and designs or models (Dahrendorf, 2010). Patents and sovereign power and space were intimately tied. The scope for national States to enforce or have their monopolistic writs recognised abroad was limited. They could guarantee the security of their protection internally, but outside its national, geo-political space, patents were extremely vulnerable.

Accordingly, what is now designated as “piracy” (the unauthorised use of patented or trademarked technology, especially inventions claimed and patented by foreign nationals) was rife during the 17th, 18th, and early 19th century; European states “pirated” each other’s inventions, especially in the textile, chemical, and pharmaceutical industries, or any technical sector related to or dependent upon engineering and technical knowledge (Chang, 2003). This is, of course, not too surprising. The 19th century was the epoch that witnessed the rapid diffusion and intensification of industrialisation (a process that was driven by technical knowhow, artefacts, and techno-scientific communities). An age that saw the rapid growth of “National Innovation Systems” where

States, largely to build up military-industrial complexes, actively intervened in and heavily subsidised the establishment of technical and scientific institutions for geo-political and economic purposes (Freeman, 2002). And, the 19th century and early 20th century was, of course, the age of industrial, mass-production and the techno-scientific engineer (Musson & Robinson, 1969); as the age when major, industrial “Tools of Empire”—e.g., gunboats, machine guns, cartographic surveys, pharmaceutical drugs, processed foods, and etc.—were developed and deployed to secure coastal outposts and “effectively occupy” African lands and peoples (Headrick, 1981).

By the late 19th century, however, things changed. At a time when the Scramble for Africa was in full swing, European States agreed a regional, patent agreement in 1883-1884: the Paris Convention for the Protection of Industrial Property 1883 (The Paris Convention). Notwithstanding its scope and coverage, the centrality of the principle of territoriality, the link between space and patent, was not erased. Signatories agreed to only protect inventions that were “worked” locally. The question of what was patentable, especially in sensitive areas such as food, chemicals, and pharmaceuticals (the areas where piracy was especially rife and pronounced), was largely left to each national state to determine and the idea of territorial sovereignty placed great checks on the extra-territorial reach of the Convention; a signatory had to expressly consent to be subjected to any juridical enforcement measure related to infringements of the Convention.

GEOGRAPHY-IN-LAW: THE PARIS CONVENTION, TERRITORY, SOVEREIGNTY, AND LOCAL WORKING

Space—or, rather, the principle of territoriality—matters immensely as a geo-legal technique under the Paris Convention (The Paris Convention is still in force, but much amended by TRIPS). Although its signatories are obliged to respect the National Treatment Principle—the obligation under art. 2 not to discriminate, but to treat domestic and foreign nationals in the same manner under law—, this obligation is limited, *inter alia*, by the “local working” requirement.

Union members (signatories to the Convention) agree to guarantee the security and enforcement of a foreign patent as long as the person to whom it is granted “adequately works” the invention within the territory where it is patented; thus, it is the space of technical performance (the “local working”) that secures sovereign protection. The further away the space of “working”, the weaker and more precarious protection gets. If a foreign invention is not adequately worked locally for a designated period, the patent is not void, but vulnerable to being subjected to many legal disabilities. The lack of local presence or working can be designated as an abuse of dominant position and a breach of contract between the State and the Patentee—i.e., the patentee has failed to transfer his/her techno-scientific to the local, political space, to sovereign that guarantees its protection. Union members can under art. 5A(2), for example, “compulsorily license” the patent—that is, use the patented invention without the permission of the foreign, patent owner—and permit local firms to locally work the invention through “non- voluntary licenses”. The link between territoriality, legal enactment, sovereignty, and protection are thus intimately tied. Local working acts as a geo-legal technique of governing transitional patent law.

In addition, the Paris Convention provides much space for national sovereignty in its provisions on enforcement. Its scope for extra-territorial jurisdiction is very limited. National discretion and jurisdiction are at the core of the Convention. Thus, even though the Paris Convention has certain enforcement mechanisms, the enforcement measures are exclusively governed by the laws of each member country; any country party to the Paris Convention is given the discretion to “adopt, in accordance with its constitution, the measures necessary to ensure the application of the Convention” (art.25). Furthermore, where a dispute arises between Union Members over the interpretation or application of the Convention, and where this dispute cannot be settled by negotiation, any one of the countries concerned may bring the dispute “before the International Court of Justice by application in conformity with the Statute of the Court, unless the countries concerned agree on some other method of settlement...” (art. 28(1)). However,

because the jurisdiction of the ICJ is highly limited (as art.36 (2) (a-d) of the Rome Statute) and its enforcement mechanism restricted, the legal remedies available to Paris Convention members are, accordingly, weak (Al-Qahtani, 2002).

Furthermore, whereas art.28 (1) of the Paris Convention provides a legal remedy for aggrieved parties, art.28 (2) reserves members the right to declare that they will not bound by this article; any member can “declare that it does not consider itself bound by the provisions” of art.28 (1) and, accordingly, “with regard to any dispute between such country and any other country of the Union, the provisions of [art.28 (1)] shall not apply”. Hence, although a juridical dispute resolution mechanism is available, this option is only exercisable through the political—i.e., it largely depends on the consent and discretion of sovereign power: for any party subject to these agreements to be sanctioned for a considered breach of its (political) commitments in the Paris Convention, the infringing party has to explicitly consent to be subjected to any, extra-territorial, juridical authority. The enforcement powers of the Convention gets weaker as it reaches national space and spatial scale of law matters for purposes of enforcement. National, jurisdictional space acts as a governing technique and break on extra-territorial reach.

THE IMPLANTATION OF EUROPEAN PATENT LAW IN AFRICA: PATENTS, TERRITORIALITY, THE POWER TO EXCLUDE

Importantly, the Paris Convention grants substantial discretion to Union Members in terms of the formulation of the substantive rights and principles that govern their domestic patent law. They have jurisdiction and wide discretion to designate, limit, exclude, and qualify which subject-matter, what type or field of engineering and technical knowledge, is patentable. The territoriality principle is thus central.

Hence, for much of late 19th and mid-20th century, until the coming into force of the TRIPS agreement (as explained below and the following chapter), many fields of technical

knowledge and engineering were excluded from patentability; for example, animal varieties, methods for the treatment of humans and animals, biological methods for the production of animal and plant varieties, food products, computer programmes, chemical products, pharmaceutical processes, methods of production of food and micro-organisms, and etc. (Stoll, et al., 2009) Laws governing patentability were, for practical purposes, a national, territorial affair. Thus, although the Convention is transnational, Union Members hold the power to negotiate what subject matter they grant sovereign protection for. Accordingly, for much of 19th and early 20th century, again, until the coming into force of the TRIPS agreement, there was a plurality of juridical, patent spaces or areas; there was a multiplicity of national translations of patent law, as each Union Member included or excluded certain subject matter from patentability.

What is important to emphasise, however, is the centrality of the concept of sovereignty and its connection to space and territoriality (or, geo-sovereignty). It is by virtue of having sovereignty over a given a territory that the patents granted by States may receive protection in other Union Member States. Territorialised sovereignty permits States to exclude and include certain subject matter from patentability. Sovereignty limits the extra-territorial reach of the Convention. Sovereignty requires foreign patents to be worked locally. Sovereignty, territory, and transnational patent governance are thus intimately tied.

PATENTS IN THE COLONIES: LAW-IN-GEOGRAPHY

This section describes how (European) patent law was implanted in Africa as part of the colonial encounter, and how colonies were incorporated into the transnational patent regime of the Paris Convention, and unpacks the differential reading and application of the doctrine of territorial sovereignty in the colonies.

Unsurprisingly, patent law travelled to Africa as part of the colonisation process. And this process influenced the particular form that it took. As with international, positivist law, it involved

a translative process: European patent law, which was based and intimately tied to the idea of sovereignty and principle of territoriality, particularly when it came to the Paris Convention, was translated and co-constituted by the geo-political space and aims of effective occupation and colonisation. Law was applied with caveat and footnote.

Because the colonies were viewed as subjected spaces, as minors under the guardianship of European parents, as spaces that lacked the legal personality and sovereignty to be independent and stand-alone objects and subjects of (European) international law (Jennings, 1963; Anghie, 2006¹⁹; Anghie, 2007; Bowden, 2009²⁰), they could not issue patents. The principle of territoriality could not apply to them. They could not protect or guarantee the security of patents over a given space. Only European States could do this. Accordingly, when patent regimes were established in African colonies in the late 19th and early 20th century, and African communities were made subject to the Paris Convention, this took place through the legal personality of European States. That is, it was, by virtue of European States that patents, firstly, had legal significance in the colonies; as such, as we shall see below, the question over the validity of patents could only be answered by colonial and imperial law—colonies were merely “registries” and depositories of and for patents issued in Europe, they could not challenge or question their validity. Secondly, it was because of the legal personality of European States that African societies became subjects and objects of international law through the Paris Convention; they could not accede to it in their own right, only through their European guardians. The specific geo-legal techniques through which they were incorporated into the Paris Convention will now be examined.

COLONIES AS REGISTRIES AND DEPOSITORIES OF EUROPEAN PATENTS

¹⁹ See : (Anghie, 2006, p.742)

²⁰ See: (Bowden, 2009, p.120)

After the Berlin Conference of the late 1880s, European States began extending their extra-territorial reach and jurisdiction to the spaces they had recently, effectively occupied through the Scramble for Africa. In the case of the British, which viewed their colonial possessions as separate elements of its colonial Empire, this took form through the Foreign Jurisdiction Act 1845 and the Validity Act of 1865.

Through these Acts, the British Crown issued a number of Orders in Council in the late 1880s and early 1900s. These orders extend its extra-territorial jurisdiction to the “Gold Coast” and Sierra Leone and what it designated, by “virtue of...capitulation...or other lawful means such as conquest” (Burge, 1907), as the British Protectorates of: Central Africa; North-Western and North-Eastern Rhodesia; East Africa; Zanzibar; Somaliland; Uganda; and etc. These orders merely “notified” African peoples of their subjected status and stipulated the specific, scope of the geo-jurisdictional claims of the British Crown. They also followed a set template: mainly, appointing a Governor with an Executive and Legislative Council (from which “natives” were excluded from participation); establishing a High Court and Court Appeal with full jurisdiction over civil and criminal matters, including, as we shall see, in respect to issues related to patents; requiring “regard” or “consideration” to be made to native, “customary” law to the extent it was not “repugnant to, or inconsistent with, [imperial] law, justice, or morality”: in other words, setting up the basic template, legal and juridical architecture, or political “tool-kit” of colonial statecraft (Jenkyns, 1902; Burge, 1907).

Through these Acts and Orders, a geo-legal space and hierarchy of power was constructed in the colonies and “protectorates”. Claims of extra-territorial jurisdiction placed colonial spaces and societies at a secondary and subjected status to Imperial law. This “Geography of Power” was manifested in the colonial, patent regimes that were instituted in Africa: the colonial, patent registry system. European spaces and law were at the centre of this geography of power whereas the colonies were at the periphery and under a secondary, subjected status.

PATENTS ORDINANCES AND THE REGISTRY SYSTEM

After these orders, Governors and Legislative Councils promulgated Patent Ordinances in the Protectorates. Through these, British, patent law was implanted into Africa. Its law was the template that was used, often verbatim, to design colonial Ordinances. This practice spread from the older Protectorates of West Africa (the Gold Coast, Sierra Leone, and what would become Nigeria in 1914) to the newly, established Protectorates of East and Central Africa. Thus, beginning in 1899 with the Gold-Coast Patent Ordinance 1889, Councils issued patent laws for the Protectorates of Sierra Leone in 1888; Nigeria in 1900; East Africa in 1901; in Gambia in 1904; East and Central Africa in 1916; etc. (Fairweather, 1910). In addition, by the 1920s, the British Crown and Legislative Councils established a patent registration system in African colonies. The system was established through the issuance of the Patent Registration Ordinances of 1925; firstly, in the Gold Coast, then in Nigeria, and finally in Eastern and Central Africa (Ezejiakor, 1973; Odek, 1994).

The system—wherever it was instituted—was a powerful, geo-legal technique. It turned African colonies and Protectorates into simple registries and depositories of patents issued in the UK. That is to say, for a patent to have legal effect in British Protectorates and Colonies, it first had to be examined, validated, and granted by the British Comptroller-General of Patents (i.e., the Patent Office) in the UK. The first step towards getting a patent in Africa was to first travel to the UK. Once granted, a patentee could apply for a Certificate of Registration in one of the many Registrar-General's Departments and Offices that were established all over Africa to register British patents. These Offices and, indeed, colonial courts, could not examine the substantive validity or legality of patents registered at their offices (as would remain the case in many African states in East Africa until the late 1980s). The extra-territorial scope of British, Imperial law was such that colonial spaces were completely subservient to its writ. Their job was to register and enforce patent, no question or open black-box that facilitated their travel to the Africa. They were,

literally, depositories of British patents (Helge, 1968; Ezejiolor, 1973; Sikoyo, et al., 2006). This was extra-territorial jurisdiction operating in its clearest and most explicit form. The geography of power was clear to see: political, sovereign, legal, and juridical power was at the Centre, in Europe, whereas subservience and subjectification was at the periphery, in Africa.

We can thus see a translation of European Patent law. Whereas Sovereignty was deeply tied to the idea of patents in Europe, in Africa, it was connected and implanted through its absence. Because Africans were viewed as lacking sovereignty, UK patent law—the writ of sovereign, imperial power—had extra-territorial reach (the Orders-in-Council made it so by “virtue of...capitulation...or other lawful means such as conquest”). The views of the “natives”, needn’t not be considered. A similar thinking applied to the Paris Convention.

THE PARIS CONVENTION: PLACING THE PERIPHERY AT THE PERIPHERY

We may recall that the concept of territorial sovereignty was inseparably tied to the very idea of patents, to the capacity to issue and enforce them and that sovereignty was at the heart of the Paris Convention, and that it was deployed as a general geo-legal technique to restrict the extra-territorial scope of the laws of Union members. When it came to its application to and translation in Africa, however, things were different. The very geography of Africa was seen to require the construction of a different legal regime and space. European law could not be applied without caveat; Africa and Africans were viewed as being too different and Other for such a course of action to be adopted. Similar to how positivist, international law was translated in Africa, so too did the Paris Convention bracket its limitations against extra-territoriality. When it came to such places as Africa, as the colonies, expanding the scope and facilitating the application of extra-territoriality was the norm.

Because Africans were considered as barbarous and lacking the capacity for self-government, because they were excluded from membership in the European Family of Nations,

because they had been incorporated into the Legal Personality and guardianship of European States, they were not viewed as capable of acceding to the Convention directly. More significantly and poignantly, they were not invited—or even considered for invitation—to participate and speak on their own behalf (I know this may seem obvious and trite to mention, but, it highlights the complete, subjected status that African spaces were placed in within European, law). How could they? They were not, independent, legal persons according to European norms. Instead, as was the case for many other international treaties in the late 19th and early 20th century, special provision was provided in the Convention for European States to extent the extra-territorial application of the Convention to their colonies, possessions, dependencies, protectorates not just in Africa, but elsewhere. This was done using geo-legal techniques.

After the Paris Convention was signed in 1883-1884, and the British Crown started issuing Patent Ordinances in the early 1900s, Union Members met in Washington in 1911 and inserted an additional paragraph to the Convention: Art. 16bi. This article permitted colonial powers to, by virtue of a mere declaration, make their newly acquired and occupied possessions and colonies in Africa subject to the Paris Convention. Specifically, it proved that:

The contracting countries have the right of acceding to the present convention at any time on behalf of their colonies, possessions, dependencies, and protectorates, or territories administrated by...any of them.

For this purpose they may either make a general declaration, including all their colonies, possessions, dependencies, and protectorates, and the territories...or may expressly name those included, or may confine themselves to indicating those which are excluded there from...

Through this article, the huge spaces in Africa were incorporated into the emerging, global, intellectual property regime of the 19th and early 20th century. As a geo-legal technique, Art. 16bi

was incredibly effective in constructing more spaces for European, patent law to travel. It reinforced and reaffirmed the subjected status of Africans. It perpetuated an imaginary of Africans as lacking self-government; the idea of the Africans being Other.

SUMMARY: LAW-IN-GEOGRAPHY, PATENTS, AND AFRICAN SPACES

The introduction patent law into Africa, and the incorporation of Africa into the emerging 19th and early 20th century, transnational patent regime of Europe, took place through a problematisation of Africans and African Spaces as Other. Geo-legal techniques, in the form of extra-territorial orders and patent ordinances, and by way of patent registration systems, implanted patent law into Africa. They made African spaces into, in effect, depositories of European law and culture. This implantation occurred without any meaningful African participation or involvement. It was, literally, an European project. Sideline and subjected by their colonial status, Africans were at the periphery. They were, at best, afterthoughts, and, at worst, problems to be managed. Geographies of difference to accompanied and translated into European law. Lacking sovereignty, they were not viewed as having required capacity (i.e., jurisdictional control over a given space over which they could issue and enforce writs) to issue patents. This was the exclusive prerogative of European, States. Patents were the particular and peculiar construct of the European imagination (Fox, 1947; Machlup & Penrose, 1950; Letwin, 1963; MacLeod, 2002). Accordingly, patents, and their associated links to European discourses and representations of colonialism—or, rather, effective occupation—as a civilising mission, were implanted into Africa through the legal personality and extra-territorial claims of European States; in the former, through patent ordinances and registration systems and, in the later, through a special status specifically created for it under the Paris Convention.

PART TWO: AFRICAN, POST-COLONIAL STRUGGLES WITH THE GLOBAL

PATENT SYSTEM: THE LEGACY OF COLONIAL LAW

The second part examines how post-colonial African states read and translated, confronted and negotiated, the colonial and transnational patent regimes that they inherited. This is done in two sections; the current section sets out the geopolitical context within which African states made sense of patents as part of a global movement to construct and build a new, international, economic order through techno-scientific nationalism, discourses about territorial sovereignty, and various geo-legal techniques justified through these discourses. The next section deals specifically with the national and regional patent regimes that were established in Africa from the 1960s to late 1980s.

TECHNO-SCIENCE AND THE NATURE OF THE COLONIAL STATE

Unlike other European colonies of the 19th century, very little investment was directed towards building firm techno-scientific or manufacturing capacity in African colonies (Clarence-Smith, 1985; Havinden & Meredith, 1993; Vitta, 1993; Butler, 1997; Mazrui & Wondji, 1999). The previous chapter noted how European, coastal outposts had changed from their previous functions during the slave-trading era. Instead of being warehouses and “export-processing zones” for African slaves, they increasingly focused on mining and agricultural goods. The posts became important nodes in transnational, supply chains. They supplied the raw materials and ingredients for factories in Europe and, indeed, America.

After the effective occupation of African lands and peoples (the Scramble for Africa), and their incorporation into the legal personality of European States as colonies, dependencies, “protectorates”, etc. the orientation of African economies towards agricultural and mining products increased in intensity and scope. Effective occupation was not merely about the construction geo-legal spaces, but, the making of geo-economic and structural relationships between colonial geographies and the Metropole. Colonial states were built to supply, integrate into the industrial and productive needs, and process of the Metropole — or rather, the needs of its commercial and manufacturing networks.

This integration was, to a large degree, pre-meditated and planned. Colonial states were placed under considerable, regulatory control and bureaucratic policing (Young, 1994; Butler, 1997; Englebert, 2000; Samatar & Samatar, 2002; Kieh, 2007; Tarrósy, et al., 2011). The production, distribution, marketing, and export of primary, mining, agricultural products and industries (the chief export areas of colonial economies) was a state-enterprise. It was controlled and managed by a network of “Colonial Trading Companies” and Marketing Boards (Jones, 1987; Butler, 1997; Barrett & Mutambatsere, 2005). These entities collaborated to keep the supply lines stable and secure. They were secured and enclosed imperial markets for goods coming from the Metropole. And, during the First and Second World Wars, the strategic importance of these supply lines grew (Andrew & Kanya-Forstner, 1978; Munro, 1983; Crowder, 1985; Dumett, 1985; Fage & Oliver, 1986; Brown, 1989; Austin & Sugihara, 1993; Cain & Hopkins, 1993; Young, 1994; Butler, 1997; Oyebade, 1998; Crowder, 2003; Dudley, 2003; Crowder, 2003; Thomas, 2005; Louis, 2006; Ginio, 2006; Rodney, 2012).

Thus, as mainly agricultural and mining economies, African colonies were markets for finished, manufactured, Euro-American goods. Great efforts were directed at building these markets—especially at times of economic crisis or depression at the Metropole; the early “development aid” of the colonies were often driven by the need to find markets for excess goods at times of recession. They were often “enclosed” behind imperial, tariff walls that heavily taxed the exportation of manufactured goods. And, as we saw in Part One, the patent regimes established during the colonial epoch—particularly, in British colonies—were not conducive for the establishment of competitive, techno-scientific bases in Africa. Patent registration systems, by only protecting patents issued from the Metropole, built colonies into mere registries, depositories, and enforcement offices for patents issued in Europe. This was true for most techno-scientific areas, but, it was particularly true for pharmaceutical engineering (Gann & Duignan, 1975).

According to existing scholarship, there is no evidence of a "native" African ever applying or receiving a patent for a pharmaceutical product during the colonial period. Registered patents were for the subsidiaries and/or licensees of manufacturers and patent-owners headquartered in Europe. Patents were registered strategically. That is, when a European manufacturer aimed to supply or enter a colonial market. Registration was a surety that the colonial state would exercise sovereign power (as described in Part One) and not permit local, manufacturers to make or derive commercial value for their patented goods. Accordingly, the colonies were mainly importers of finished, pharmaceutical goods from Europe (Foste, 1990).

That is not to say no local manufacturing capacity emerged; for, some did. However, these had significant limitations. Among other things, and as noted above, the range and complexity of products that they manufactured was extremely narrow and highly restricted. And, technical and manufacturing capacities were comparatively low (particularly, the availability and quality of such things as machinery, spare parts, active and essential manufacturing ingredients, facilities and plants, technical expertise, and etc.) (Foste, 1990). In addition, in very many cases, these "local" manufacturers were merely agents, imports, licensees, and logistical conduits of European goods manufactured elsewhere. As such, African pharmaceutical industries concentrated less on "manufacturing" and more on distribution, retail, and consumption; that is, the importation, (re)formulation, packaging, wholesaling, distribution, and retailing of European, finished or semi-finished products (Foste, 1990).

THE REGIONAL PLAN TO ADDRESS THE LACK OF TECHNO-SCIENTIFIC CAPACITY IN AFRICA: THE LAGOS PLAN OF ACTION (LPA) AND COLONIAL TRAUMA

After "de-colonisation" in the 1960s and 1970s, post-colonial governments in Africa made the establishment and/or upgrade of techno-scientific capacity the focus of their industrialisation plans. Techno-science and "techno nationalism" was represented as a tool through which African

states and nations were going to be literally “built”, “electrified”, “modernised”, “industrialised”, “motorised”, and, importantly and ultimately, made “self-reliant” and post-colonial (Oyebola, 1970; Onyemelukwe, 1984; Forje, 1993; Vitta, 1993; Gaillard & Waast, 1993; Butler, 1997; Helen L. Tilley, 2007). Following a trend that was taking place in Latin America and Asia (noticeably in China, India, and Latin American around Import-Substitution-Industrialisation and the establishment of a New International Economic Order (NIEO)), ten and five-year industrialisation-plans, massive investments in technical education, engineering, and manufacturing, and the protection and promotion of “infant industries” were common. Along with diverse movements calling for a return to more “authentic” African forms of life, technical knowledge and engineering was widely represented as the best means to regress and address Africa’s defect of sovereignty; its representation as other, backwards and “developing”²¹.

Although Import-Substitution-Industrialisation and industrialisation have a problematic place in some Critical Studies’ scholarship, and some (for good reason) see them as an extension of a political “grand narrative” that takes as given Europe as a normative referent (Munck & O’Hearn, 1999; Sardar, 1999), this line of reasoning needn’t be taken too far. For, such reasoning may presuppose a false binary that may not necessarily be there. That is, a position that Africans and post-colonial governments, either had to completely reject or embrace anything or everything European. Hybridised and creolised discourses and rationalities played a part. For many African governments (as we shall see with the Lagos Plan), a different language-game, techno-scientific translation, or regional “reading” was at play (Ewing, 1964; Wad, 1985; Butler, 1997); there are questions about particularity that must be taken into account. Industrialisation was not (just) about becoming “European”, but acquiring a repertoire of technical artefacts and techniques to defend themselves against outside aggression; what the Organisation of African Unity called “neo-colonialist external forces”. It was a tool of “self-reliance”, “self-determination”, and, indeed, self-

²¹ To get a good sense of how much techno-scientific activity was taking place see: (Ewing, 1964)

actualisation, a means to build a local, ingenious capacity. By accumulating the artefacts and techniques of European modernity, especially in technical and engineering fields of knowledge and practice; by building dams, electric steel works factories, refineries, electrolysis and distillation complexes; by establishing engineering colleges, and etc.: African peoples, however hybridised and creolised by the colonial experience, could be secured against neo-colonialism.

Thus, throughout the 1960s and 1970s, as in Latin American and elsewhere, United Nations Economic Commission for Africa was established, and multiple regional meetings and conferences were held by African states to formulate national and regional science and technology programmes (Ewing, 1964; Vitta, 1993). One of the most significant was held in 1979, “the Monrovia Strategy”, or, in its full title: “Monrovia Declaration of Commitment of the Heads of State and Government, of the Organization of African Unity on Guidelines and Measures for National and Collective Self-Reliance in Social and Economic Development for the Establishment of a New International Economic Order”. Framing their project through the framework of what became the campaign for New International Economic Order, Import-Substitution Industrialisation, and a logic of collective autarky, or “self-reliance”, the Monrovia Strategy aimed to, in words of its Declaration: “ensure that [African states] individually and collectively restructure their economic and social strategies and programmes so as to achieve rapid socio-economic change and to establish a solid domestic and intra-African base for a self-sustaining, self-reliant development and economic growth”. In suggesting its emancipatory and geo-political aims, the Declaration stated that the strategic goal was to:

Put science and technology in the service of development by reinforcing autonomous capacity of African countries in this field”; develop “indigenous... technical manpower and technological capabilities to enable [African] peoples to assume great responsibility for the achievement of [their] individual and collective development...(Organization of African Unity, 1985)

In April 1980, a detailed, regional plan was formulated: The Lagos Plan Of Action For The Economic Development Of Africa 1980-2000 (Organization of African Unity, 1985). The dates are especially important because the 1980-2000 periods would be a dreadful time for Africa, as we shall see.

THE LAGOS PLAN AS A PROGRAMME TO ADDRESS THE COLONIAL LEGACY AND THE PROBLEM OF NEOCOLONIALITY

In introducing the Lagos Plan, African states relied on a social memory and narrative of a (traumatised) colonial past to rationalise and legitimate their project. Arguing that post-coloniality had not yet been realised in the 1960s and 1970s, they presented and imagined the Plan as project to resist what they identified as “neo-colonialist external forces”. Remembering colonialism, the Plan noted:

...Africa is...a victim of settler exploitation arising from colonialism, racism and apartheid. Indeed, Africa was directly exploited during the colonial period and for the past two decades; this exploitation has been carried out through neo-colonialist external forces which seek to influence the economic policies and directions of the African State... (Organization of African Unity, 1985)

Viewed as a plan to amputate this colonial past and limit the influence of European states in African, political life, the Plan formulated a comprehensive strategy to realise a “self-reliant”, techno-scientific capacity in Africa through ISI. The ultimately aim was the realisation of an “indigenous generation of technology”. The stipulated targets and objectives of the Plan were many as they were ambitious. For lack of time and space, the full scope of subject matter addressed in the Plan cannot be covered here (although it is highly recommended to read to the document to appreciate the full breath of its ambition).

Among other things, the Plan aimed to: establish “...a solid base for self-sustained industrialisation”; “develop human resources”; produce and become self-sufficient in production “of agricultural inputs such as fertilisers, pesticides, agricultural tools and machines”; develop domestic industries to conduct “on-the-spot processing...of the continent's raw materials”: establish and protect new, “infant”, industrial and manufacturing industries in “food and agro, building, metallurgical, mechanical, electrical and electronic, and chemical and pharmaceutical industries”. To achieve these goals, the Lagos Plan called for a new kind “dirigisme” and, broadly, the establishment of regional and sub-regional “science and technology systems”.

However, the objectives of the Plan would not be realised. The African Sovereign-Debt-Crisis of the 1970s-2000s placed most African governments under the control of the “neo-colonialist external forces” that African states sought to emancipate themselves. In addition, these “external forces”, in time, directly governed “the economic policies, [structure], and direction of the African State” throughout the 1980s and 1990s. Nevertheless, for this chapter, Lagos Plan needs to be placed within a wider, global context: the campaign by post-colonial states in Latin America and Asia to establish a New International Economic Order, and their call to bring transnational, patent governance into their campaign for techno-scientific “self-reliance” and territorial sovereignty.

PATENTS, THE LAGOS PLAN, AND GLOBAL PATENT GOVERNANCE

Patents played an important role not just in the Lagos Plan, but also in the national ISI programmes of African States. Patents and access to patented techno-science were also important issues in calls by African governments for a New International Economic Order (NIEO).

Calls for a New International Economic Order had its roots in the late 1950s and early 1960s. It was deeply influenced by the Dependency Theory or school of industrial development and geo-politics (Prebisch, 1971; Friedmann & Wayne, 1977; Edelstein, 1981; Munck & O'Hearn,

1999). It was initially promoted by Latin American, political theorists—noticeably Raúl Prebisch—of Marxist orientation (Prebisch, 1971). As such, Lenin’s work—“Imperialism, the Highest Stage of Capitalism”—played a role in situating the post-colonial epoch within a geo-political map and structural system of unequal transnational trade and exchange. For them, the objective was for post-colonial geographies and peoples (those at the periphery of the capitalist World System) to end their structural, geo-economic, and political dependence on their former colonisers—i.e., the primary architects, beneficiaries, and extractors of value from the periphery to the core: Europe and the United States. Rather than encouraging “tweaks” to and accommodation with the system, dependency theorists called on post-colonial states to detach themselves from the System; to not integrate themselves in transnational supply and value chains designed and operated by Euro-American, commercial networks. They were, instead and as suggested in the Lagos Plan, to construct local and indigenous capacities (especially in the industrial and techno-scientific area) and secure spaces of “self-sufficiency”. Industrial autonomy and economic “self-determination” was the key; that is, they had to wean themselves off imported, Euro-American goods. They had to build local expertise, capacities, industries, and knowhow to change their position within in the international, economic order they were imbedded (Prebisch, 1971).

Further, they called on post-colonial states to incentivise Transnational Corporations (the new, colonial trading companies), who grew in global significance by the 1970s and 1980s (Chandler & Mazlish, 2005; Ietto-Gillies, 2012), to transfer their technical expertise to local industries. Where incentives did not work, they were encouraged to nationalise or appropriate foreign assets and technical knowhow, especially patents, when deemed necessary for the public interest or conducive for the realisation objectives of autonomy and self-sufficiency. Central planning and nationalisation were not yet “dirty words” (Yergin & Stanislaw, 1998). Not surprisingly, national and territorial concepts of sovereignty (as discussed in Part One) were central to their programmes and geo-political manifesto. Economic nationalism was thematic. A project

to be realised through various means; that is, by dirigisme, central planning, ISI, the owning and nationalising territorial assets, most especially mines and facilities related to extractive industries, or any other techniques (Kirkpatrick, 1983; Chant & McIlwaine, 2008; Pieterse, 2000).

The centre of this campaign was at the United Nations. Specifically, the United Nations Conference on Trade and Development (UNCTAD); it was led by Prebisch and a network of similarly-minded groups and institutions associated with the United Nations Economic Commissions of for Latin America and the Caribbean American and the Economic Commission of Africa (Chant & McIlwaine, 2008; Dosman, 2008). As with what was taking place in many other forums of the UN-system in the 1960 and 1970s where newly-independent states held a voting majority (Nyangoni, 1985; Patil, 2007; Falk, et al., 2008), UNCTAD became another space where an association, policy network, or trans-national advocacy group of and for post-colonial states (the Group of 77) coalesced. It was a space where law was translated into geo-political problems, often linked to colonialism or escaping the effects and shadows of colonial life. Along with other Latin American and Asian States, African governments participated in the initiatives and campaigns of UNCTAD—as we shall see, especially with respect to changing the transnational regime of patent governance.

Through resolutions and declarations issued at the United Nations General Assembly, and a number of commissioned reports on a wide array of subject-matter (e.g., on racism; apartheid; territorial sovereignty, especially over natural resources; human, civil, political, and environmental rights; de-colonisation, and etc.), UNCTAD became a centre of gravity for Dependency Theory (Taylor & Smith, 2007; Dosman, 2008). In 1974, it successfully drafted and campaign for its most famous declaration: the Declaration on the Establishment of a New International Economic Order of 1974. Making clear their debt to Dependency Theory, and highlighting the centrality of techno-science and territorial sovereignty in its imaginary of post-colonialism, the first paragraph of the

Declaration problematized the economic order of the 1970s, the purported epoch of post-coloniality, along a political narrative of neo-colonialism:

The greatest and most significant achievement during the last decades has been the independence from colonial and alien domination of a large number of peoples and nations which has enabled them to become members of the community of free peoples. However, the remaining vestiges of alien and colonial domination, foreign occupation, racial discrimination, apartheid and neo-colonialism in all its forms continue to be among the greatest obstacles to the full emancipation and progress of the developing countries and all the peoples involved. The benefits of technological progress are not shared equitably by all members of the international community...The gap between the developed and the developing countries continues to widen in a system that was established at a time when most of the developing countries did not even exist as independent States and which perpetuates inequality. (Declaration on the Establishment of a New International Economic Order, 1974)

In addition, it is worth highlighting that this programme was also anchored on a grand ethical claim. Euro-American states, by virtue of colonisation, it was held, owed colonised peoples an obligation of “restitution and full compensation” for their acts of territorial acquisition and exploitation by way of conquest, “effective occupation. They owed colonised peoples a share of their fruits their industrialisation as it they, colonised peoples, that (unwillingly) subsidised it with their labour and resources. One way restitution was to be made was through technology transfer: getting the new “leviathans” of global capital, the multinational corporations that registered, owned, and licensed nearly all patents in post-colonial states, to transfer some of their artefacts and know-how to colonised peoples (Corea, 1977; Kagan, 1978; Raman, 1978; Garcia-Amador, 1980; Behrman, 1981; Carasco, 1983; Hope, 1983; Qureshi, 2010).

Where restitution was not forthcoming, the goal was to dismantle the vestiges, traces, remnants, and effects of the colonial order (as described in the Chapter Two). Reinforcing and expanding claims of territorial sovereignty, especially over mineral resources and techno-science, was highlighted. Whereas the colonial period was about a “dynamics of difference”, the othering of non-European people, and claims of non-Europeans having a defect of sovereignty, the New International Economic Order was about extending the principles of self-determination, equality, reciprocity, and comity; in some sense, getting post-colonial states to become good and equal members of the European family of nations. Stop the types of geo-legal translations that took place during the colonial period as described in Chapter Two. As the Declaration noted, the New International Economic Order was to be founded on:

Sovereign equality of States, self-determination of all peoples, inadmissibility of the acquisition of territories by force, territorial integrity and non-interference in the internal affairs of other States... Giving to the developing countries access to the achievements of modern science and technology, and promoting the transfer of technology and the creation of indigenous technology...(Declaration on the Establishment of a New International Economic Order, 1974)

Thus, as suggested by the Declaration, the question or relationship between law and (under) development, and law and (neo) colonialism, was a running motif within the work and reports of UNCTAD. It was radical programme, even if usually based upon European discourses and norms of law, to re-image and re-order the transnational, economic structure within which post-colonial state operates.

From its establishment in 1965, transnational public law, particularly economic and investment law, was a subject of much investigation and problematisation. Moreover, from the 1970s to mid-1980s, UNCTAD and African States proposed to revise the Paris Convention as

another front in their campaign for post-coloniality. As with the Declaration, the aim was bring patents firmly within the scope of territorial sovereignty.

DEPENDENCY THEORY AND POST-COLONIAL STRUGGLES OVER THE GLOBAL PATENT REGIME: TERRITORIALITY, PATENTS, AND GEOGRAPHIES OF POWER

Along the lines of Dependency Theory and the New International Economic Order, African states and the Group of 77 (The Group) proposed to revise the Paris Convention (Haar, 1982). Specifically, they aimed to (re)attach the conception of intellectual property, generally, and patents, specifically, to territorial sovereignty—to, the principle of territoriality. Whereas Euro-American states tried to problematized patents around discourses of property rights, extra-territoriality, universalism (i.e., patents as a species of commercial property and right to revenue), the Group conceptualise patents as a residue and necessary derivative of the exercise of sovereign, territorial, and jurisdictional power (Falk, et al., 2008). That is, patents were not “property”, a privilege granted by a sovereign over a given space over which it claims jurisdiction and authority (Haar, 1982). They want to attack “the view from nowhere” in law, the idea that law lacked locality and place, that law was not co-constituted by geographies and structures of power, by the politics and friction of place (Falk, et al., 2008; Gathii, 2008). As UNCTAD and the Group of 77 noted in 1977: “the imbalance between the strong emphasis on private rights and the virtual elimination of both the concept of private obligation and the concept of public interest is a main feature of the Paris Convention whose reversal must be a central aim of any process of revision” (United Nations Conference On Trade And Development, 1977).

In the early 1980s, the Group and UNCTAD organised conferences—in Geneva, 1980; Nairobi 1981; and Geneva, 1982—to revise the Paris Convention along territorial conceptualisations and problematisations of patents. The main areas they focused on were local working requirements, the issuance of compulsory licenses, the sovereignty to decide on subject-

matter patentability, and national treatment (Cohen, 1979; Landau, 1980; Loughran, 1981; Haar, 1982; Catanese, 1985). Like their natural resources, patents, post-colonial states presented patents as attached and subject to territorial sovereignty. Everything was done to push that idea of locality in recommendations for Paris Convention reform.

In terms of local working, as explained in Part One, art. 5A (2) of the Paris Convention (The Convention) permitted Union Members, or signatories to the Paris Convention, to require foreign patents owners to “work” their patents locally. Provided certain conditions were met, failure to work an invention could result in the host state issuing compulsory licenses—public licenses—for third-parties to work the invention locally (Kunz-Hallstein, 1979; Kunz-Hallstein, 1989; Halewood, 1997). The Group of 77, generally, and African states, specifically, wished to loosen or completely eliminate pre-conditions required to issue compulsory licenses. They also wanted to expand national discretion to attach local working as a condition for the enforcement of foreign patents. That is to say, they want to extend the use of local working as a geo-legal and regulatory technique; as a basis to increase the transfer of foreign, techno-scientific knowhow to their national economy. Accordingly, they proposed to, firstly, drastically limit the temporal allowance granted to foreign, patent-owners to work inventions locally (which was either four years from the date of filing of a patent application or three years from the date of a grant of patent); and, secondly, to restrict or disqualify the use of imports (rather the local provision and/or manufacture of a patented invention) as a means of satisfying “local working” conditions (Loughran, 1981). One could say, they wanted to literally tie patents to territorial sovereignty and locality. Patents were local or glocal artefacts of sovereign power.

Linked to local working was a demand for Union members to have wide or complete discretion to decide on what subject-matter, or field of engineering and technical knowledge, was capable of being patentable. Since many members of the Group made self-reliance a national objective, the capacity to exclude certain industries and technical areas from patentability, or decide

on the specific condition under which patents could be granted, was presented as pivotal towards self-reliance objectives (Loughran, 1981; Haar, 1982). In such areas as petrochemicals, pharmaceuticals, agriculture, and other technical fields of engineering and manufacturing that the Group, and Africa specifically, lacked domestic capacity and self-sufficiency, the discretion to exclude and set conditions was seen as fundamental (Haar, 1982). There was no point working for national, self-reliance if the state was impeded from protecting national industries from foreign, monopolistic pressure.

What all of this amounted to was that the Group was proposing to dilute the principle of National Treatment, the principle that all Union nationals, whether foreign or domestic, were to be treated similarly under domestic patent law. It was proposing to differentiate and discriminate between domestic and foreign, territorial and extra-territorial. For the Group, and especially African states, foreign nationals were “neo-colonialist external forces” (e.g. transnational corporations) from whom they needed protection. By holding, if not all, then an overwhelming majority of patents registered or issued in post-colonial states, most especially in Africa, a call for non-discrimination and national treatment was to condone a power geography and relationship of power: it was to perpetuate and revive the vestiges colonialism, to do nothing about re-configuration of colonial trading companies into transnational corporations.

The provisions of the Paris Conventions were therefore problematized geo-politically. The Group saw local working, compulsory licenses, national treatment, as geo-legal technique of immense significance (Techniques that constructed highly performative, geo-legal spaces of power; techniques and actants with the capacity to discipline and order national, political, social, and economic life). Law could not be separated from geo-politics. It could not be set aside from fundamental questions about what it meant to be post-colonial. To leave them unchallenged would be perpetuate dependence and limit local spaces of emancipatory action.

Thus, in the Lagos Plan, “industrial property systems” were selected as an important facet in the African “objective of technological self-reliance”. In its aim to encourage an “inward approach to industrial development aim[ed] at the... upgrading... “indigenous inputs”, the Plan called for African States to specifically work for the “revision of the Paris Convention” and, *inter alia*, coordinate to make: “inventions, patents and technical know-how...available freely by industrialised countries to the countries of the Group of 77 as a definitive contribution of developed countries to the industrial development of developing countries”. This matter because, after “de-colonisation”, many African states either inherited patent laws from the colonial era or had adopted “model laws” largely formulated by Euro-American commercial network, professional and epistemic communities. To know what the Lagos Plan was aiming for one must note what African states had inherited.

POST-COLONIALITY, PATENT REGISTRATION SYSTEMS, AND “MODEL LAWS”

This section describes the national and regional patent regimes that were established in Africa in the 1960s to the late 1980s. It also unpacks and examines how the colonial past influenced them and how they were informed by the commercial interests of the former colonial powers of Africa.

POST-COLONIAL PATENT REGIMES IN AFRICA AND THE COLONIAL LEGACY

In the 1960s and 1970s, African states established patent regimes largely inherited from the colonial era. Two schematic routes were taken: incorporation, where colonial laws remained in-force extra-territorially through patent registration systems, or transplantation, where “Model Laws” formulated by WIPO and/or European patent offices were adopted (Helge, 1968).

In terms of the first route, many former, British colonies in East Africa, such as Kenya, Tanzania, and Uganda maintained the patent registration system of the colonial era (as described in Part One). That is to say, these states did not have domestic patent laws, *per se*. They acted as registries and depositories for patents granted in and by Britain. For example, to get a patent in Kenya in the 1960s and 1970s, and indeed for much of the 1980s, applicants—whether Kenyan or foreigner—had to first apply to the Patent Office of the United Kingdom. Once the Office examined and granted a patent, according to British law, one simply had to apply within three years of a grant of patent to have it registered in Kenya; this was done by producing a certificate from Comptroller General of the Patent Office with a certified copy of patent and a statement as to whether the UK patent is still in force (Helge, 1968). If there were no defects as to form, its validity or grounds of patentability were not questioned. British law operated extra-territorially. In these regimes, colonial law, in effect, persisted until the late 1980s. For most other African States, however, “Model Laws”, whether formulated by the World Intellectual Property Organisation (WIPO) or the patent offices of European States, formed the basis of post-colonial patent regimes.

THE ROLE OF MODEL LAWS IN AFRICAN PATENT REGIMES

In 1964 and 1965, Group 77 members commissioned UNCTAD to examine the relationship between patents, and the transfer of technology to post-colonial states. After a wide-ranging review of complex issues around licensing agreements and compulsory licenses, the report concluded by recommending that Euro-American states do more to promote technology transfer. In the same year (1965) the United International Bureaux for the Protection of Intellectual Property (BIRPI), what would become World Intellectual Property Organisation (WIPO) in the early 1970s, published the final text for its Model Law for Developing Countries on Inventions (the Model Law) (Ladas, 1966; Helge, 1968). Similar to what would happen with the TRIPS agreement in the mid-1990s, the Model Law was largely drafted by Euro-American, commercial networks and epistemic communities: mainly, the International Association for Protection of

Industrial Property and the International Chamber of Commerce. As a member of the expert committee recalled:

It is clear that the major part of the Model Law, particularly the substantive provisions on patents, follows generally the views of the International Association for Protection of Industrial Property, as expressed in its own study on uniform provisions for patents, in its discussion of the Council of Europe Convention of November 1964, and in its consideration of the European Common Market Patent Law. Indeed, the International Executive Committee of the International Association for Protection of Industrial Property, meeting in Salzburg in September 1964, carefully studied the Model Law draft and made suggestions, most of which were proposed and supported by...the delegates of the International Association and the ICC at the Geneva Conference which adopted the final text. (Ladas, 1966, p.19)

Unsurprisingly, none of the radical proposals tabled by post-colonial states, related to compulsory licensing and local working, were adopted. The International Association and Chamber of Commerce rejected proposals that would permit compulsory licenses “in the name of the public interest without specifying the broad categories of situations in which the public interest may justify compulsory licenses” (Penrose, 1973). They also rejected calls for the availability of compulsory licenses for non-working “whenever the owner of the patent has not filed with the government a concrete and satisfactory plan for starting working of the invention within a stated period of time” (Penrose, 1973). The International Association suggested, and the BIRPI expert committee accepted, a narrower use of compulsory licenses along the lines of art. 5A (2) of the Paris Convention (as described above). Yet, despite having their proposals rejected and playing a very limited role in its drafting, BIRPI’s—or, rather the WIPO’s—Model Law became the template for many most patent regimes in Africa. In very many cases, it was transplanted without much modification.

THE ESTABLISHMENT OF REGIONAL PATENT OFFICES IN AFRICA: GEO-
LEGAL TECHNIQUES AND EURO-AMERICAN GEOGRAPHIES OF POWER

The other way that transplantation took place was through regional patent organisations established in the 1960s and 1970s by European patent offices, African States, BIRPI, and the International Association for Protection of Industrial Property. Two such organisations emerged: the Organisation Africain et Malgache de Cooperation Economique, established in 1962, but expanded and renamed in 1977 as the African Intellectual Property Organisation (OAPI) and; secondly, the Industrial Property Organization for English-speaking Africa (ESARIPO), established in 1972, but expanded and renamed in 1985 as the African Regional Industrial Property Organization (ARIPO). The later acronyms of these organisations will be used from now on.

It was in Africa that the first, regional, centralised patent office (i.e., the Organisation Africain et Malgache de Cooperation Economique or (OAPI) was established in September 13, 1962; a system that is only being attempted in Europe now, given the political sensitivities and risks attached to such a project. Made up of 12 former French colonies, and headquartered in Yaoundé, Cameroon, OAPI was largely the creation of the French Patent Office: The National Industrial Property Institute (INPI) (Frishauf & Bassard, 1962; Helge, 1968; Deere, 2008). From the early 1960s, teams from INPI drafted model laws for its former colonies and wrote the basic framework agreement for what became OAPI. As suggested by certain provisions of the framework agreement, which estopped African states from invalidating patents issued during the colonial era and required them to extend these patents for another 20 years after a request for re-validation by its owners, the active involvement of the French patent office was driven by concerns to protect the commercial interests of transnational, French companies operating in Africa. Furthermore, the pervasive presence of INPI, the conspicuous absence of African voices in the drafting of the framework agreement, and the degree of extra-territorial centralisation evident in the legal and administrative structure OAPI, and the practice of African states adopting en mass

model patent laws from INPI, indicates a design by INPI to constitute a *de facto* registration system in its former French colonies (Helge, 1968). Thus, patents issued by any OAPI member state through its centralised procedure had extra-territorial effect and validity in other states. Patenting in one was patenting in all. As the framework agreement establishing OAPI openly acknowledge, the aim was to have OAPI operate as a national patent office for all its members.

In 1976, former British colonies under the patent registration system followed suit and established their own, regional patent office under the Lusaka Agreement: the African Regional Intellectual Property Organization (ARIPO). As with former, French colonies and OAPI, the Industrial Property Organization was largely the creation of external actors. The negotiations for it began in the 1960s and was mainly the work of BIRPI, the British Patent Office, the International Association for Protection of Industrial Property, and a set of commissions established by the patent office's/registries of the former British colonies of (mostly) East Africa (Helge, 1968; Penrose, 1973); in time it would grow to include other, former British Colonies in Southern and West Africa. As with OAPI, it was established as a centralised procedure to fill for multiple patents across many African states and, importantly, to secure the validity of patents issued during the colonial era; as with elsewhere, the vast-majority, if not all, patents filled and registered in East Africa in the 1960s and 1970s were for foreign, European—and most especially British—multinational companies (Penrose, 1973; Haar, 1982).

For some East African states, however, ARIPO added another level of extra-territorial complexity. That is, because many of them still operated under the colonial patent registration system of the 1920s (as described in Part One), and many would continue to do so until the mid to late 1980s, ARIPO operated, in effect, as a registry for patents issued by the British Patent Office according to British law. To fill for patent in Kenya through ARIPO, for example, was to fill for a patent to the UK Patent Office, which, if successful, would then be registered in Kenya. ARIPO within this system was an extra-territorial, geo-legal extension of British patent law. And

for those states that were not part of registration system, ARIPO worked because they all adopted BIRPI's Model Patent Law in the early 1970s; accordingly, they all based their patent law on the same model or legislative template.

ARIPO, OAPI, AND PHARMACEUTICAL PATENTS

Because the patent laws OAPI and ARIPO states were largely drafted by former, colonial powers or their epistemic communities (e.g., the International Association for Protection of Industrial Property and the International Chamber of Commerce, and etc.), the patent laws of these regional organisations significantly protected the interest of Euro-American, multinational corporations. I already noted how specific provisions of the framework agreement of OAPI and ARIPO explicitly protected and extended colonial patents. With respect to pharmaceuticals, OAPI and ARIPO were outliers when compared to developments in other post-colonial geographies: in Asia and Latin America, a number of states, most especially India and South Korea, either excluded or placed significant legal disabilities on the patentability of pharmaceuticals. In OAPI and ARIPO, however, things were different (Adusei, 2013). Although, as described in section two, the vast-majority of African states were importers of pharmaceutical products, and most lacked the domestic capacity to make their own, and the patenting of pharmaceuticals was an exclusive Euro-American, commercial activity, OAPI protected pharmaceutical patents since 1977 and ARIPO (with the exception of Ghana, Malawi, Zimbabwe, and Zambia) did the same by 1984—and a great many others, such as Nigeria, and East-African states that maintained the patent registration system, already did so even before joining these regional organisations.

In short, in form and in practice, the patent regimes of post-colonial states were the creations of Euro-American, commercial and epistemic communities; they were, Euro-American, constructions and extra-territorial geographies of power. Even before the TRIPS agreement, most African states had a very limited experience of writing their own patents law. Since the colonial period, when patent registration systems were established all over Africa, African peoples and

voices have been at the periphery of the transnational, patent system. They have been governed by a highly performative, geo-political space, by a various forms of geo-legal techniques, that they have had marginal roles in designing.

SUMMARY: POST-COLONIAL STRUGGLES OVER THE GLOBAL PATENT REGIME AND THE COLONIAL LEGACY

During the colonial period, colonial states did not direct much investment towards the techno-scientific engineering and manufacturing, and industrial base, of African colonies. The colonies were generally structured to produce agricultural and mining products. In terms of finished goods that required technical know-how, the colonies were mostly importers and distributors, especially in the field of pharmaceutical engineering. This situation was not, however, incidental. Great effort and design, especially in relation to governance and regulation (e.g., tariffs and patents law), went towards placing Africa at the most vulnerable positions in transnational supply, production, labour, and value chains.

After “de-colonisation” in the 1960s and 1970s, post-colonial governments focused much energy—or nationalist discourse— towards upgrading Africa’s techno-scientific capacity. In many states, various forms of “techno-nationalism”, built on Import-Substitution-Industrialisation (ISI), emerged. The belief that techno-science would secure Africa’s post-colonial future was widespread. By the late 1970s and early 1980s, a pan-African, regional plan was formulated: the Lagos Plan. It was ambitious and comprehensive. It aimed, at its core, to realise “self-sufficiency” as a step towards self-determination, as a way to amputate the vestiges of the colonial past. Through industrialisation and techno-science, African peoples were to be secured from the nefarious influence of what was termed “neo-colonialist external forces”: Euro-American states and their associated, transnational corporations and techno-scientific communities.

The Lagos Plan was part of a bigger, transnational movement: a campaign by post-colonial states, from Asia and Latin America, centred at the United Nations Conference on Trade and Development (UNCTAD). The campaign aimed to build what they declared at the UN General Assembly as a New International Economic Order (NIEO). An order free from the “dynamics of difference”, the discourse about non-European defects of sovereignty, the Othering of non-European peoples, and the traces, shadows, remnants, and legal and economic structures of the colonial past. It was revolutionary and radical. Drawing from dependency theorists, among other things, the campaign sought, ultimately, to end the structural dependence of post-colonial states on their former colonisers.

To do this, they deployed the imaginary and discourse of territorial sovereignty unconditionally. They planned to expand the territorial state in various ways; that is, to grow its reach and subsume many spheres and forms of life, especially in agriculture, mining, and engineering (the fields where they were most dependent on foreign intervention) under public control. The state was to coordinate the mobilisation and recruitment of techno-science, to direct its utilisation towards the realisation of national needs and interests. Private rights and commercial privileges, particularly those owned by foreign entities and granted by state, such as patents, became the immediate targets of much attention and problematisation. Although many areas of transnational economic law were targeted, the Paris Convention took special significance.

From the 1960s, post-colonial states campaigned to revise the Paris Convention. Focusing on geo-legal techniques, such as local working requirements and the issuance of compulsory licenses, they demanded for the Paris Convention to be revised, for it to be brought under their campaign for a New International Economic Order. Increasing the scope for the principles of territoriality and subsidiarity was thematic. They called for many powers within the Convention to be brought under the discretion and competence of post-colonial governments, such as the power to: decide on what fields of techno-science was patentable; for the power to set conditions on

when and who could receive patents; require patents to be attached to local needs; issue compulsory licenses without outside interference. Nationality and territoriality, not extra-territoriality was essential. This was the only way that their dream for self-reliance and self-determination, their call for technology-transfer as an act of restitution from their former colonisers, would be realised.

However, this campaign of self-reliance and self-determination came to be viewed with much suspicion by Euro-American states, particularly by their commercial networks who, by the late 1970s and 1980s, were engaged in intense, commercial rivalry with Asian manufacturers. As part of this rivalry, and as part of a general programme to deal with what these networks considered as “unfair competition” from and state-aid provided to their Asian rivals, Euro-American, commercial networks literally wrote and constructed a new, global, patent regime in the form of the WTO’s Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). With the coming into force of TRIPS, the position of African states—who became signatories to agreement at impressive speed and in numbers—was drastically affected; their capacity to use patent law to build domestic, manufacturing and industrial capacity—including, especially, in the pharmaceutical sector—was significantly restricted by the new, global, patent rules that Euro-American networks formulated; rules that specifically targeted and sought to control the local, legal spaces of post-colonial states. Part three quickly recounts the emergence of TRIPS and its significance for post-colonial states, broadly, and African governments, specifically, with respect to health-policy and pharmaceutical production.

PART THREE: THE HISTORICAL CONTEXT AND POLITICAL ECONOMY OF THE EMERGECE OF TRIPS AS A NEW GLOBAL PATENT REGIME

This section begins by tracing the emergence of high-technology industries in Europe and the United States. It finishes by describing, firstly, how these industries reacted to competition from Asia and the general campaign by postcolonial states in the 1960s and 1980s to reform the

global patent system and use patents as a tool of industrialization; and, secondly, it unpacks the economic and legal discourses about piracy and lawlessness in the Global South that used by Euro-American states to legitimise calls to restrict the sovereignty and political choices are the government in the Global South.

Largely because of the Second World War and Cold War, Euro-American States invested heavily in many sectors of engineering. These sectors became important in “the knowledge economy” that would emerge in the 1970s and 1980s and expand rapidly in the 1990s and early 2000s (O'Mara, 2005). In 1940s and 1950s, much state-resources was directed at, *inter alia*, aerospace, electronics, computing, artificial intelligence, chemical, and bio-chemical and pharmaceutical engineering, and any other field of technical knowledge related to “high” technology (Leslie, 1993; Lowen, 1997; Bud & Gummett, 1999; National Academy of Sciences; et al., 1999; O'Mara, 2005; Akera, 2007; Needell, 2012). This was not solely a state enterprise, but a cooperative project bet it, commercial actors, and educational institutions. A project built on an impressive network and assemblage of national, scientific boards and grant-funding institutions (e.g., in the United States, the National Science Foundation, Defense Advanced Research Projects Agency; National Institutes of Health; Materials Research Science and Engineering Centers (MRSEC) and, in the UK, the Science Research Council (SRC), The National Institute for Research in Nuclear Science (NIRNS), and etc. (Bud & Gummett, 1999; National Academy of Sciences; et al., 1999). Accordingly, state-agencies and funding-bodies played important coordinative roles. They directed research towards areas that were designated as being of national economic and security interest.

Accordingly, public-private partnerships and intersections between state agencies, funding bodies, universities, and industrial research laboratories were multi-faceted and complex. This was especially so in defence industries or what, in the 1950s, came to be appropriately called the “military-industrial” and “military-academic” complex (O'Mara, 2005; Pavelec, 2010). Thus, there

was nothing particularly private about science and engineering in this period: in the context of the Cold War, these complexes were part of a national, military, and geo-economic campaign that brought together, and blurred the lines between, public and private (Abbate, 2000; Needell, 2012).

By the 1960s and 1970s, these investments and partnerships started bearing fruit (Congressional Research Service, 1976; Congressional Research Service, 1977). Increasingly, Euro-American economies relied on the “knowledge” sector, on industries deeply involved in techno-science and technical engineering, for grow and increasingly percentage of employment (Glasmeier, 1984; Papadakis, 2000; Makhija & Williamson, 2000; Bardhan, et al., 2003). Thus, transnational, Euro-American companies— most especially those from the United States— dominated global markets for high technology. Techno-science, for most of the 1950s, 1960s, and 1970s was the (almost) exclusive preserve and province of Europe and America (Congressional Research Service, 1977; Hughes, 1986; Scherer, 1992). Few post-colonial states competed or could compete with them; as we saw in the context of Africa, African states were just beginning to establish, or, rather, formulating plans to establish, techno-scientific capacities in Africa during the period—the idea of directly competing with Euro-American companies was still a speculative notion that, as indicated in previous chapter, did not, in fact, come to be realised. For Euro-American companies, huge wealth was generated in the process. As suggested in the case of Africa in respect to pharmaceuticals, much of this wealth was extracted from post-colonial geographies; although the much of the circulation took place within Europe and America. Consequently, patenting in post-colonial geographies became a global, operation (an issue that was causing great worry in these geographies as we have seen). Protecting the revenue stream from these assets through patents and other means of commercial diplomacy gained in significance (Congressional Research Service, 1977).

Throughout the 1970s, however, Euro-American states experienced and faced considerable economic challenges: The “Great Recession”: Oil Crisis: Stagflation: high

unemployment and inflation: low productivity: frequent industrial disputes; sovereign debt crises; etc. The financial and commercial community, including many manufacturers and exporters in the engineering sector, saw profit margins streams, including royalties from patents, fall or decrease in growth (Tarantelli & Willke, 1978; Eckstein, 1978; Brunner, 1980; Olson, 1982; Helliwell, et al., 1985; Rogerson, 1987; Brown, 2004; Engerman & Gallman, 2000; Floud & Johnson, 2004; Harvey, 2007).

The question of why this was happening and who was to blame became an economic and political issue of considerable, national and pan-national significance. Besides blaming the growth of the regulatory and welfare state since the 1940s, and the apparent damaging influence of trade-unions (Salvati & Brosio, 1979; Harvey, 2007), the commercial community also looked elsewhere: to developments taking place in post-colonial geographies, especially in Asia.

THE ROLE OF TECHNO-NATIONALISM IN ASIA AND THE EMERGENCE OF A NEW PATENT REGIME

For the first time since the 1950s, Euro-American companies started facing serious competition from Asia in many fields of high-technology in the mid-1970s and early 1980s; first from Japan, and later from South Korea and Taiwan, followed by Singapore, Hong-Kong, and many others in the 1990s such as India and China (Lall, 1980; Davis & Hatano, 1985; Ernst, 1989; Zhu & Hill, 2006; Shin, 2006). This development, the rapid industrialisation of these Newly Industrialised Countries (NICs), was also the result of state intervention, largely modelled on European and American templates from the 19th and early 20th century. As with Euro-American States, Asian governments invested considerably in technical knowledge and engineering in the 1960s and 1970s; established national, scientific boards; encouraged and coordinated public-private partnerships between industrial factories and laboratories and public and academic research centres. Techno-scientific industrialisation in Asia was, largely, a state-managed and coordinated

project; state involvement differed in degree, not, in absence as often argued by some (White, 1984; White & Gray, 1988; Chu, 1989; Pirie, 2008).

Through “Techno-Nationalism” and the use of Imports-Substitution-Industrialisation (ISI) techniques, they sidelined patents, or applied them differentially across various sectors and fields of engineering. Depending on the strategic significance attributed to a given sector, and depending on whether there were government programmes or initiatives to upgrade and protect a given sector, patent law was applied differently and selectively. The common practice was to lower the duration of patent protection in strategic industries and/or protect “process patents” rather than “substance patents”; that is, allow domestic firms to go around foreign patents by finding other technical means or process of engineering or manufacturing a patented product or end of result. Differential treatment was especially salient in the automobile, electronics, computing, and chemical and pharmaceutical engineering sectors (Bello & Holmer, 1989; Jonnard, et al., 1985; Chang, 2003). Using a discourse that African states would draw from in the Lagos Plan, they presented patents not as an absolute, proprietary right, but as a privilege granted and curtailed by the exercise of state power over given space it claims jurisdiction and authority. Patents were the off-spring of the state and thus dependent on its will.

Like Euro-American states in the 1960 and 1970s, their investments started bearing fruit in the mid-1970s and early 1980s. By then, many of the transnational, Asian corporations widely recognised today (e.g., Samsung, Sony, Toyota, etc.), started directly competing with Euro-American, corporations; not just domestically in their home states, but in Europe and America and other international markets in the post-colonial world. Competition was quite pronounced in the automobile, electronics, semiconductor, computing, pharmaceutical, chemical and biochemical markets (Lall, 1980; Davis & Hatano, 1985; Ernst, 1989; Zhu & Hill, 2006; Shin, 2006). Eventually, the United States would negotiate and imposed extra-territorial controls on these

geographies as a means of protecting its own industries from significant disturbances and detriment.

Euro-American, trade associations, especially those working through the United States International Trade Commission (ITC) and the Office of the Special Trade Representative (STR), responded by blaming Asian companies and governments for their loss in profits, for their industrial difficulties at home. Bracketing how much state-aid they themselves had received in the 1940s and 1950s, they labelled the activities of Asian governments, particularly their patent practices, as unfair subsidies; as state-aid that distorted and impeded international commerce of Euro-American companies. National and transnational campaigns calling on Euro-American governments to respond to these “unfair” regulatory practices grew in scale and frequency (Lawrence, 1984; D'Alessandro, 1987; Emmert, 1989; Sullivan, 1989; Hoffman & Marcou, 1989; Hoffman & Marcou, 1990; Berliner, 1990; Leaffer, 1990; Mall, 1990; Adeloje, 1993).

DISCOURSES AROUND PATENT PIRACY AS A JUSTIFICATION FOR A NEW PATENT REGIME

Within the context of the Declaration of a New International Economic Order, the developments in Asia, the “Rise of the East”, as it were, was most worrying. The Declaration and calls by the Group of 77 for the revision of the Paris Convention appeared like a campaign by African and Latin American governments to have the right, the tools, and geo-legal techniques, to imitate what Asian governments were doing. In their minds, African governments were asking themselves, in effect: Why couldn't we be the next South Korea, Taiwan, Singapore, Hong Kong, or, later, India? What was the Lagos Plan but another ISI programme, modelled on Asia, to use law, especially patents and compulsory licenses, as a tool to expropriate, European and American assets and technical expertise? Did the Lagos Plan and the Declaration make “the transfer of technology” an integral element of the compensation and restitution that African and Latin American states were asking for colonialism?

Instead of competing fairly, they argued, post-colonial governments in Africa and Latin America, following the Asian model, were, in effect, aiding and abetting the theft of their property. Differential patent laws in Asia, and calls for more national discretion in respect to local working and compulsory licensing in Africa and elsewhere, were, to Euro-American companies, a cloak and pretext for state expropriation, for state-sanctioned piracy (Berliner, 1990; Mall, 1990). An archetypical example of this logic was expressed by Brian Berliner, a prominent legal commentator at the time—echoing the voices of many:

Unfortunately, these practices [the differential application of patent law by post-colonial states] cause trade problems for U.S. business...merchandise produced in States is rendered uncompetitive in these markets... piracy of intellectual property cost U.S. industry \$20 billion in annual sales...U.S. companies lose sales in the United States to illegally imported counterfeit products... Guarding against this piracy is exceedingly difficult since the U.S. intellectual property laws have no extraterritorial effect... (Berliner, 1990, p.726)

Following this theme, Frank Emmert similarly paints the geo-political map of this issue and notes the nefarious influence and illicit nature of pirated spaces and circulations:

...[different] types of markets can be distinguished. First, there is the home state of the pirate...the pirate not only has the advantages of no shipping costs and low wages, she is additionally able to undersell because she incurs no R & D and marketing costs. A second market is the home state of the IP owner (e.g. the U.S.)...many U.S. firms complain that they are being undersold and displaced even in their own backyard by pirated goods. (Emmert, 1989, p. 1322)

THE USE OF SECTION 301 TO TARGET COUNTRIES OF THE GLOBAL
SOUTH: NEW GEOGRAPHIES OF POWER

In America, trade associations (simply “associations” from now on) representing technoscientific industries responded by successfully lobbying for the amendment of existing, trade law. By doing so they constructed new “Geographies of Power”, new geo-legal and regulatory spaces of extra-territorial governance. That is, typologies of post-colonial geographies based on an imaginary of piracy, lawlessness, and perceptions of commercial risk. The geo-legal spaces constructed were performative and highly political. Using Section 301 actions, as will be described below, they were built as lists of targets, as spaces, to direct and focus American intervention, beginning in Asia, and eventually ending in Africa and the formulation of a new, transnational patent convention (the TRIPS agreement) drafted by themselves.

They did this by amending existing law. By adding to a piece of legislation already used to target and retaliate against those States that American associations designated as impeding access to domestic markets: Mainly, the U.S. Trade Act of 1974 (Bello & Holmer, 1986). Specifically, section 301 of the Act that prohibits foreign states, and most especially GATT signatories with legal obligations to the United State, from granting subsidies, or state-aid and technical assistance, or any other non-tariff measures that could assist or protect their local, industries from, or restrict market access to, American competition: any measure that could be used to unfairly promote exports to the United States at the detriment of American industries (Bello & Holmer, 1986). Section 301 authorised the US President, with advice from the Office of the United States Trade Representative (USTR), to negotiate and consult, and seek compensation and remedies for detriments caused to American industries, for “acts, policies, or practices” that “...burden or restrict United States commerce”. Where the USTR or the President could reach a negotiated settlement with infringing states, the Act grants the President the power and discretion to take retaliative, compensatory, and/or corrective action. This action could take the form of increased tariffs or any other actions they deemed appropriate as a remedy for American industries.

For much of the 1970s, however, disputes rarely escalated to tariff increases. The Trade Act was mostly used to impose and/or negotiate, depending where you stand, “Voluntary Export Restraints” with a number of Asian countries, especially Japan, over a wide set of goods and industries (Feenstra, 1984; Jones, 1984; Hughes & Krueger, 1984; Coleman, 1990; McClenahan, 1991). With the threat of Section 301 actions hanging over them, Asian countries agreed to restrain their exports to the United States to levels determined by American associations. Export Restraints, in effect, constituted a transnational import licensing system between the United States and those that signed such agreements. It established an extra-territorial regime where Asian states were, in practice, licensed by the United States to import particular quantities of goods from a given sector for a given time and, importantly, for a price set by American traders. A breach of these conditions and restraints on trade would suspend the license and trigger other remedial and retaliative action. The Restraints usually operated in sectors where American industries felt vulnerable to foreign exports (e.g., agriculture, cotton, textiles, steel, machine parts, automobiles, electronics, computing, etc.) (Hughes & Krueger, 1984).

In 1984, Section 301 was amended to include intellectual property—that is, patent law—as a qualifying area where “acts, policies, or practices” of a foreign government could “...burden or restrict United States commerce”. Subsequently, for much of the early and mid-1980s, US associations filed a number of complaints against many Asian and Latin American states (e.g. Taiwan, Singapore, Mexico, Thailand, etc.). The complaints focused on their patenting laws, especially in respect to pharmaceutical, electronics, and computing products (Winter, 1987; Berliner, 1990). Arguing that the patent laws of such states imposed trade-related burdens and restrictions on United States commerce, these governments, with the exception of Mexico, were compelled, for fear of US retaliative action, to amend laws to satisfy American standards; by doing this, they, in effect, entered into another form of quasi- Export Restraint regime with the US.

Driven by this precedence, Section 301 was amended, again, in 1988 to require the Office of the United States Trade Representative to publish a report every year, identifying which states did not comply with American standards of intellectual property nor had such laws as would pose a commercial risk to the assets and patents of American companies. The Office was required to compile an annual list of “priority countries” against whom the United States would focus special attention; that is, the list of countries, as per “Special 301”, that commit “the most onerous or egregious acts, policies, or practices that (i) deny adequate and effective intellectual property rights, or (ii) deny fair and equitable market access to United States persons that rely upon intellectual property protection”. Another “watch list” was formulated for those countries that were at risk of impeding American commerce or posing a threat to revenue streams. In other words, there was a “target list” of states which subscribed to the Declaration for a New International Economic Order or agreed with calls by the Group of 77 for the Paris Convention to be revised—to be revised so as to permit more space for territorial sovereignty in the transnational, governance of patent law. “Special 301” would be used, as Brian Berliner titled his paper on the subject, to “make Intellectual Property Pirates Walk the Plank” (Berliner, 1990). He expands further:

The pirates of the 17th century forced their victims to “walk the plank” to encourage them to disclose the whereabouts of buried treasure...Similarly, Special 301 encourages foreign nations to protect U.S. rights under threat of economic punishment. Accordingly, the United States should be prepared to use Special 301 to “assist” the multilateral and bilateral negotiations. Special 301 is a formidable political weapon in fighting the international trade wars...the mere threat of using the weapon is just as effective in getting the intellectual property pirates to the negotiating table as is the use of the weapon itself... (Berliner, 1990, p.752)

TRIPS, EXTRATERRITORIALITY, AND THE DISPLACEMENT OF LOCALITY IN
TRANSNATIONAL, PATENT GOVERNANCE

This final section traces the drafting of the TRIPS agreement by Euro-American commercial associations and examines the extraterritorial techniques that they introduced to limit the political decisions of governments in the Global South, diminish the principle of territoriality with respect to the issuance and governance of patents, and survey and regulate the production, importation, and circulation of patented knowledge and artefacts (particularly pharmaceutical products) within and between post-colonial states.

BUILDING A TRANSNATIONAL NETWORK: DISCIPLING SPACES OF PIRACY

As noted above, the Group of 77, including many African states, had campaigned for the revision of the Paris Convention in the 1960s and early 1980s. However, in 1986, two years after the Trade Act 1974 was amended to include intellectual property as a non-tariff measure that could impede American commerce, the US International Trade Commission was instructed by the US government to investigate the cost to US industry from foreign “piracy and counterfeits”. It concluded, unsurprisingly, that the losses were significant—ranging from 41-63 billion dollars per year— and recommended that the US government take remedial action (Emmert, 1989; Berliner, 1990).

In the same year, an advocacy and political-action committee was established in the United States: The Intellectual Property Committee (IPC or “Committee” from now on). It was composed of thirteen major, transnational, American companies in the electronics, chemical, pharmaceutical, computing, and entertainment and publishing sector (Bilzi, 1989). The principal members were: Bristol Myers, Du Pont, FMC, General Electric, Hewlett-Packard, IBM, Johnson & Johnson, Merck, Monsanto, Pfizer, Rockwell International and Warner Communications (Federal News Service, 1989). In short, all the industries that were competing with Asian companies in the 1980s (PR Newswire, 1988).

Within six months, similar European and Japanese associations (e.g., Union of Industrial and Employers' Confederations of Europe (UNICE) and The Japanese Federation of Economic Organizations (Keidanren), etc.) were incorporated into the Committee, it into what became the Tripartite Consensus. With this alliance, the Committee became a powerful, transnational, advocacy and policy network. Within a short period, the Tripartite Consensus successfully lobbied Euro-American governments to add transnational patent—or, more broadly, intellectual property—governance into the negotiation agenda of the Ministerial Conference of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) (Bilzi, 1989). Their lobbying was so successful that its proposals, almost verbatim, found its way into the Ministerial Declaration that was issued at the Conference, outlying the aims of the negotiation round.

In 1988, the Tripartite Consensus not only successfully lobbied to amend section 301 of the Trade Act 1974 (to introduce the watch and priority list system discussed above), but also drafted a 100-page, framework document: entitled, appropriately, the “Basic Framework of GATT Provisions on Intellectual Property”, it became the basis of the Trade-Related Aspects of the Intellectual Property Agreement (TRIPS) in 1995 (Bilzi, 1989). Like the BIRPI Expert Committee that drafted the model laws of post-colonial states in the 1960s and 1970s, the Committee, without much, or possibly any, consultation with African States, orchestrated and managed what became one of the most radical transformations of transnational patent governance since the 19th century. Especially, in respect to how the principle of territorial sovereignty was treated as a geo-legal technique of subsidiarity.

As the Committee made clear publically, at the core of the Framework, and eventually TRIPS, was a project to end the campaign for a New International Economic Order and its focus on locality and territorial sovereignty (Federal News Service, 1989). The objective was to deploy different geo-legal techniques to construct new, legal and political spaces in post-colonial states. That is, extra-territorial zones or nodes where national spaces became hybridised, enclosed, and

glocal spaces of Euro-American action and intervention. Spaces where the friction or problem of place was made to disappear. Where “the view from nowhere”, and positivist imaginaries of universal law, would triumph. Spaces where Euro-American law, artefacts, assets, and, indeed, “property rights” could circulate securely without the pollution of piracy and illicit counterfeits from within and without. That is, as will be shown below, TRIPS was as much about enclosing spaces as it was about “freeing” and opening them up to free trade. To make post-colonial spaces free, they had to first govern them, discipline them, and make them unfree.

A NEW GEOGRAPHY OF POWER: EXTRA-TERRITORIALITY, ENCLOSURE, TRIPS

By analysing its provisions and *travaux préparatoires*, the Framework Document, and later TRIPS itself, an argument can be made that they were a geopolitical assault against the campaign for a New International Economic Order. Among other things, their principal aim, whether by design or effect, was to undermine fundamental objectives of the campaign: mainly, to use the principle of territoriality and doctrine of territorial sovereignty as a means and discourse which through national and foreign patent owners could be treated differently under national law; the grant of patents could be made subject to local working requirements and, thus in effect, technology transfer; and domestic infant industries could be protected and made self-reliant by limiting competition from and their dependency on foreign multinational corporations (see above for details).

Accordingly, the focus and much of the content of the Framework document and TRIPS relates to ways to divorce the issuance and governance of patents from the doctrine of territorial sovereignty and the principle of territoriality. This can be seen by looking at how TRIPS dealt with; local working requirements (art.27), the issuance of compulsory licenses for failure to work (Art.31), and the exclusions of certain types of technical knowledge or sectors from patentability (Art.27 (1)), notably pharmaceuticals, so as to protect or build local industry.

TRIPS, thus, bans local working requirements in categorical terms: art.2) stipulates that “patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced”. It also eliminates, by and large, the possibility of import-substitution-industrialisation techniques by way of excluding certain fields of engineering or manufacturing sectors, such, as pharmaceuticals, from patentability: article 27(1) stipulates, subject to some limitations, that “patents shall be available for any inventions, whether products or processes, in all fields of technology”. The old industrial-strategies used by Euro-American states in the 19th and early 20th century, and Asian states in the 1960s and 1970s, to selectively and differentially formulate, apply, govern, and enforce patents according to discourses of national and public interest, practices of state intervention and coordination, were eliminated. In other words, the basic planks and foundation of the Lagos Plan (as described in chapter four) were taken out, only six years after it was published. Without the possibly of local working and differential or sectoral regimes of patent law, how were African states to realise their “objective of technological self-reliance” or encourage an “inward approach to industrial development aim[ed] at the... upgrading... “indigenous inputs”?

Instead, much of the Framework document and the TRIPS agreement focuses on committing post-colonial states to policing their own, national spaces and industries on behalf of foreign, patent owners—i.e., “neo-colonialist external forces”; a great deal of TRIPS (sections 4 and 5 of the agreement), covers judicial remedies and border controls. That is, detailed requirements that all TRIPS-signatories provide juridical, civil, and criminal remedies for foreign patents owners to take action against private and public nationals that use their patterns without prior authorisation or adequate compensation. Thus, art. 42 specifically stipulates, by way of example, that: All “Members shall make available to right holders civil judicial procedures concerning the enforcement of any intellectual property right covered by [TRIPS]”. These traditional remedies include such things as: granting juridical authorities the power to “order a

party to desist from an infringement, *inter alia* to prevent the entry into the channels of commerce in their jurisdiction of imported goods that involve the infringement of an intellectual property right, immediately after customs clearance of such goods” (art. 44): the power, to “to order the infringer to pay the right holder damages adequate to compensate for the injury the right holder has suffered” (art. 45). In addition, and more extra-territorially, art. 61 require member state to provide for:

... Criminal procedures and penalties to be applied at least in cases of wilful trademark counterfeiting or copyright piracy on a commercial scale. Remedies available shall include imprisonment and/or monetary fines sufficient to provide a deterrent, consistently with the level of penalties applied for crimes of a corresponding gravity. In appropriate cases, remedies available shall also include the seizure, forfeiture and destruction of the infringing goods and of any materials and implements the predominant use of which has been in the commission of the offence. Members may provide for criminal procedures and penalties to be applied in other cases of infringement of intellectual property rights, in particular where they are committed wilfully and on a commercial scale.

Through these and other provisions of TRIPS, signatories are called upon to take steps to secure, recover, extract, and, possibly, expand the revenue streams of patent owners through licensing fees; fee extracted from domestic industries and any other entity seeking to undercut their commercial interests by circulating or importing “counterfeit” goods into TRIPS-signatories. The aim is to purify, internally, and seal off, externally, post-colonial states from illicit artefacts and practices. As with the practice of effective occupation described in the previous chapter, the aim is to “enclose” these spaces for Euro-American commerce.

Thus, although TRIPS is often described as a project to “free” local markets from state intervention, its core aim is to enclose them by recruiting the domestic state, and its juridical, legislative, executive, and policing agencies to build geo-legal and regulatory spaces of Euro-

American intervention. That is, as I have said above, glocal zones of extra-territorial action and intervention. This is done in two ways, by the use of local remedies as described and, importantly, by instituting quasi-judicial, disciplinary techniques and practices within TRIPS: mainly, the dispute settlement body (as per Part V of TRIPS) and the periodic review of post-colonial states by Euro-American states through the TRIPS Council (as per Part VI and art. 68).

In this regime, the principle of territoriality, as cherished by Euro-American states for most of the 19th and 20th century under the Paris Convention, is bracketed. Extra-territoriality, *de facto* and in some sense *de jure*, becomes the norm. However, and most interestingly, in their attempt to disentangle the definition, or, rather, construction, of patents from the exercise of sovereign-power through a discourse of “property rights” and “piracy”, Euro-American states have merely reinforced it in TRIPS. For the agreement to be extra-territorial, it first has to be local and territorial. TRIPS require many of the typical functions and imaginaries of territorial sovereignty to be maintained and, to some extent, enhanced. To remove itself from the market, post-colonial states have been required to police it, to intervene more extensively and become ever-more pervasive in governing and regulating its operation. It is not that the “bad ol’ days” of state intervention, as imagined in the Lagos Plan, went away. It is only that the interests for whom state intervention was justified has shifted. The aim of protecting infant industries was replaced with objectives to protect foreign, patent owners from infant, domestic industries.

POST-COLONIALITY, TRIPS, AND THE TRACES OF COLONIAL LIFE

The previous chapter described how through Orders in Council, the British Crown established extra-territorial courts in its African colonies to enforce patent law and examined the way the patent registration system made colonial geographies mere registries and depositories of British patents. In TRIPS, there is some similarity with this colonial practice. By legislating domestic, juridical remedies for foreign patent owners to enforce their patents, post-colonial states, including nearly all African that signed the TRIPS agreement have become, in effect, extra-

territorial courts for the WTO, enforcing foreign patent law and rights when it conflicts with domestic practice. And, given that not much has changed, at least in Africa, in respect to which nationals own patents in post-colonial states, TRIPS has constituted a quasi, patent-registration system where post-colonial states function as mere depositories and registries of foreign, Euro-American patents.

Underlying this extra-territorial shift was, of course, an undercurrent and discourse similar to that seen above. Extra-territorial techniques are justified because of the immorality of post-colonial states: that is, their inclination towards piracy and theft; their lack of respect for law, for the property of others; their lack of civility, adequate reasoning, and capacity for self-government. Unable to trust these governments, the TRIPS agreement was need to help post-colonial states govern themselves better. As with before, a denial of sovereignty, the dynamics of difference, was used justified because of the civilising mission.

SECURING POST-COLONIAL SPACES FROM CROSS-CONTAMINATION: TRIPS AND THE SPECIAL CASE OF PHARMACEUTICALS

Given that pharmaceuticals were a technical field of knowledge and area of engineering that many post-colonial states excluded from patentability (or governed differently under patent law), including many in Africa such as Ghana and Malawi, the Framework document and, eventually, TRIPS, made pharmaceuticals and patents a distinct and special area of regulation (as per. section five of TRIPS). Varied and many geo-legal techniques were deployed to regulate it. Driving these techniques, however, was an objective to govern and order the circulation of artefacts between post-colonial geographies, an aim actuated by a pervasive fear that illicit artefacts manufactured in one post-colonial place would be permitted to circulate and cross-contaminate another. As with the sections that dealt with sealing-off border controls, many of the geo-legal techniques dealing with pharmaceuticals had (has) similar aims: to make sure illicit imports and artefacts are not permitted to enter secured, patented geographies. A case in point is how the

TRIPS agreement deals with compulsory licensing—a subject that is addressed in far more detail in the next chapter within the specific context of debates about access to and the local production of generic HIV/AIDS drugs in Africa.

CONCLUSION

The travel of patent law to Africa was deeply connected to and in many ways was inseparable from the colonization process and the laws and geo-legal techniques that facilitated it. Although patents are very much an aspect of the exercise of sovereign power, a manifestation or extension of the sovereign right to exercise authority and jurisdiction over a given territory and its peoples and socioeconomic processes, what was especially salient about the travel of patent law to Africa was, among other things: the extent to which and the role that extraterritorial techniques and discourses played in placing or transplanting patents in Africa and incorporating African colonies into the transnational patent regime that emerged in the late 19th century around the Paris Convention. Patents, and the principle or doctrine of territoriality, that was used to justify them in Europe, and limit the extraterritorial reach of the Paris Convention, word translated and read very differently within the context of the colonies. In such places, the legend amis a shin of patterns took place through a denial or suspension of sovereignty for colonised peoples: it was because they were constructed and treated as lacking sovereignty (as explained in much more detail in the previous chapter) that the travel of patent law to Africa was justified.

For post-colonial, African states, the calls for the reform of the global patent regime, were viewed as an inextricable part of a much bigger global campaign and geopolitical struggle: a project by postcolonial states and peoples, to not only systematically disassemble the colonial institutions and structures that they inherited, and to express grievances about and to claim compensation and restitution for the harm and trauma that they suffered as a result of colonisation, but, a wider campaign to claim and entrench territorial sovereignty. It was a political demand for the sovereign rights that they perceived as having been denied them by European states and international

positivist law, of which patent law, and the Paris Convention specifically, was seen as an integral part. Yet, many African states seem, not by lack of effort and political will, to have failed in their campaign in two significant respects. The national and regional patent systems that they instituted (especially in east Africa) were considerably influenced by colonial law and the commercial interests of the former colonial powers. And with regard to tying patents to territorial sovereignty, many, even in the late 1980s, lacked independent patent regimes and continued to operate the patent registration systems of the colonial era, and their calls to have more political discretion with respect to local working requirements and compulsory licences were successfully fought off, and drastically diluted, by the transnational Euro-American commercial and epistemic community.

Ironically, the African campaigns of the 1960s and the 1990s, along with many others in the Global south during the same period, brought about an aggressive reaction by Euro-American commercial and epistemic networks to further place limits on the political choices and territorial sovereignty that African states, and their postcolonial counterparts elsewhere, had over patents and their governance, mainly: the TRIPS agreement, the subject matter of the next chapter of this thesis, and the regime that caused so much controversy with respect to the capacity of African states to locally manufacture and import and indeed circulate generic HIV / AIDS drugs—particularly those manufactured and coming from other geographies and post-colonial states of the Global South.

**CHAPTER FIVE: GLOBAL PATENT GOVERNANCE AND THE
POLITICAL ECONOMY OF DEBATES ABOUT ACCESS TO
GENERIC DRUGS IN AFRICA**

With the colonial and post-colonial context of the political geography and economy of patents in Africa situated in the previous chapter, this chapter refocuses its specific attention on HIV/AIDS; particularly, the question of access to, and the local production and importation, of HIV/AIDS drugs. The aim of this chapter is to examine how transnational patent governance (and issues related to it discussed in the previous chapter) influenced the policy of African and Euro-American states, and UN-agencies and NGOs, concerning the provision of affordable access to (mostly generic) HIV / AIDS drugs in Africa. It concentrates on one major international agreement: The WTO's Trade-Related Aspects of Intellectual Property Rights Agreement (TRIPS), and subsequent reforms and amendments to it, and unpacks how it governed the local production and importation of generic drugs, not just in and from Africa, but between African states and other geographies of the Global South.

The chapter is divided into two parts. The first part describes the geopolitics and political economy of access to HIV / AIDS in the late 1980s and 1990s. It analyses the financial and political capability of African states to procure medicines for their own citizens (within the context of a regional sovereign debt crisis); it sets out the basic provisions of the TRIPS agreement with respect to patents, public health, and pharmaceutical products; it explains the policy of Euro-American states towards patents and access to medicines in Africa; and it traces the early attempts by UN-agencies to export medicines to Africa. The second part describes reforms to the TRIPS agreement, especially with respect to the issuance compulsory licences for the import of generic drugs, and unpacks how the reforms regulated the importation and circulation of generic drugs between, in effect, countries of the Global South, generally, and African states, specifically.

Theoretically, the chapter is interested in the geographies of law and, relatedly, their intersections with and impact on the geopolitics and political economy of transnational health governance; how, for example, transnational agreements, such as TRIPS, govern through constructions of space and concerns about circulation and movement between and across legal

spaces. So, the way that TRIPS governed the public health policy of African governments, the activities of UN-agencies and generic manufacturers in the Global South, by regulating where and how generic drugs were produced, and where and how they circulated. By tracing the legal geography of TRIPS, and the way it governs these circulation, the structural power that underlies it, and gives it extraterritorial and global reach, is brought to saliency.

The chapter argues that TRIPS played a considerable in the construction of bifurcated, global geography of access to treatment. And it contends that the reforms of TRIPS agreement did little to improve the capacity of African states to locally manufacturer or import generic HIV drugs, but increased the extraterritorial discipline and supervision of the political decisions of African states with respect to public health generally and the production and importation of generic HIV / AIDS drugs, particularly.

PART ONE: THE POLITICAL ECONOMY OF DEBATES ABOUT ACCESS TO TREATMENT AND THE ROLE OF THE GLOBAL PATENT REGIME UNDER TRIPS

By the late 1980s and early 1990s, UNAIDS and other sero-epidemiological programmes in Africa had mapped the spread of HIV / AIDS in Africa. They periodically published their reports and statistics, presenting them at conferences, and distributing them to the lay media and press, UN-agencies, NGOs, health campaign groups and activists, and generally any group or fora they could reach. They made HIV / AIDS in Africa visible and in many ways “Africanised” the pathology; in the sense that it was not only Africans that were getting HIV / AIDS, but the representations and discourses around it increasingly focused on the plight of Africans, especially the deaths of women and the young (as many UNAIDS' reports, and "media packs" for the press, emphasised). This Africanisation was linked to another issue; the geographic differences in the availability, and most significantly, accessibility of affordable treatment around the world, particularly when it came to comparing the accessibility of treatment between seropositive

populations in the West and those in the Global South— most glaringly and tragically those in Sub-Saharan Africa. This section, examines the capacity of African states to procure treatment for their citizens and the policies of Euro-American states with regard to the provision of treatment in the continent.

As soon as the first HIV/ AIDS drugs became available in 1987, two geographies of treatment quickly emerged, one in Europe and the United States, and another in such places as Africa. In the former, after much contestation and activism by the gay community and HIV-patient associations, there was massive financial and institutional investment in treatment, especially in the public procurement of drugs (which typically cost about \$10-20, 000 per patient per year) and the expansion of public health insurance coverage for seropositive populations; this. The gap between availability and access, the actual ability to buy or receive treatment, quickly narrowed, meaning that the majority of AIDS patients received treatment quickly and in an affordable way (a great many did not pay any individual financial contribution towards their treatment, but almost completely relied on state support and subsidies) (National Research Council, 1993; Anis, et al., 1998; Matic, et al., 2006; Shelling, 2006; National Research Council, 2005; Volberding, 2008). In places such as Africa, however, things could not have been more different. The availability of drugs was low and their accessibility, because of their price and other factors related to the nature of the African pharmaceutical industry examined in the next chapter, was difficult for the overwhelming majority of seropositive populations in the continent.

One significant contributor in this difference in access and availability was the fiscal and monetary position of African states when compared to their American and European counterparts in the 1980s and 1990s. Many African states were not only unwilling (for reasons provided in the previous chapter), but incapable, in simple material terms, of committing the same type, volume, and scale of financial and technical resources as European and American states. Their political-economy and geopolitical position was completely different, the state of their state, and their

capacity to make sovereign decisions, in terms of the allocation of resources and the elasticity of "policy space", was considerably restricted and influenced by external forces and networks. Because, for reasons that are connected to the colonial past (as examined in chapter four), African states were in the mist and throes of a severe, chronic, and deep, regional sovereign-debt crisis; it started in the late 1970s and intensified in geographic scale and political and social crisis in the 1980s and 1990s, and somewhat peaking in the early 2000s. Most African states were under "structural adjustment programmes" because they had defaulted on their debts to foreign, commercial banks and multilateral lending institutions, such the World Bank and the International Monetary Fund; a number of "defaults" and "reschedulings" began in the 1970s (starting with Zaire in 1976); by the early 1980s 10 African countries "rescheduled" their debts; by the mid-1980s, 19 others followed suit, setting a trend that continue throughout the 1990s (Lyoha, 1999).

To receive temporary relief or "haircuts" on their debt-repayment schedules, and to increase what was euphemistically called their "debt-repayment capacity", they were instructed/commanded to, among other things, sell off or privatise public assets and corporations, and to reduce or completely remove government support and subsidies for social programmes (Nyang'oro & Shaw, 1992; Tarrósy, et al., 2011). These cuts were felt in many sectors, but one of the areas that was most impacted was, of course, public health insurance and medical care provision; government grants for these services were drastically cut; fees and contributions for medical services and prescription drugs were systematically introduced; and price regulation for pharmaceutical wholesaling and distribution was liberalised (Foste, 1990; Peters, et al., 1999; Turshen, 1999; Soyibo, 2005; Sama & Nguyen, 2008; Quaye, 2010). The provision of healthcare became, increasingly, privatised and highly dependent on individual households and families, and sustained by a ever-growing domestic and international "nongovernmental" sector—e.g., charities, community associations, and importantly, foreign NGOs, UN-agencies, and etc. (Foste, 1990). Therefore, Foste has noted the situation thus:

In the best of cases, the non-profit sector uses private sector management techniques in the pursuit of social goals. They often purchase their drugs overseas through special purchasing agencies such as ECHO [The European Commission's Directorate General for Humanitarian Aid], IDA [The International Development Association (IDA) of the World Bank), or UNICEF [The United Nations Children's Fund] in some cases, in bulk and using generic names. In a growing number of countries they [these international networks] are forming their own procurement and distribution agencies to enable the different missions and organisations to benefit from bulk purchase and consequently lower prices. Many of these organisations have to charge a user fee for their services to complement any support they may get from overseas or from the government in form of a capitation fee or a bed-day subsidy, they are eager to keep prices low so that utilization do not decline due to patients' inability to pay the fee....In cooperation with WHO...various hospitals and church organizations have created a drug procurement and distribution agency (MEDS).... And etc. (Foste, 1990, p.7)

To put it crudely: African governments retracted themselves from the public health and medical services business. If anyone was going to pay \$10-20, 000 for HIV / AIDS drugs, it was not going to be African governments, but private individuals (the great majority of which survived with less than two dollars a day) the nongovernmental sector (Tilak, 1990; Lehman, 1992; Cheru, 2002; Poku, 2002).

Despite the dire financial state of most African governments, and the visibility of HIV / AIDS in Africa, the policy of European and American states throughout the 1990s was to focus on prevention and epidemiological surveillance; not to pay for the treatment of Africans, but to fund, through UNAIDS, public health campaigns to inform Africans of the risks of HIV / AIDS, and to modify their sexual behaviour and social norms around sexual intercourse, and to carefully and meticulously record the spread and deaths resulting from HIV / AIDS. Outside of those two

activities or objectives, however, the general policy was to do nothing with respect to treatment; no financial aid to African governments, no let-up on structural adjustment programmes, and no support for the non-governmental sector to intervene and provide treatment. Seropositive populations in Africa were, by and large, by themselves. The sole responsibility and burden of getting treatment was on themselves, their family and social connections, or, if they were fortunate, the generosity of foreign NGOs or UN-agencies. Going to the state was not, for many, a realistic and meaningful option. Thus, as will be explained below, Africa was, for most of the 1990s, a "zero treatment zone"—not literally, of course, but for a great many seropositive Africans and communities.

ACCESS TO TREATMENT DEBATES AND TRIPS

Besides expanding their funding for UNAIDS and the recordings of deaths from HIV / AIDS, European and American governments were particularly active in another way. For much of 1990s and early 2000s (as the South African case analysed below will illustrate), they proactively advocated for and promoted the commercial interests of their multinational corporations abroad, particularly when it came to securing their patents and licensing income in commercially significant, emerging markets in Asia, Latin America, and in such countries as South Africa, Kenya, Nigeria, and Ghana in Africa. They advocated on their behalf by, at moments of disputes between them and governments in the Global South: directly calling heads of states and government in question; sending official delegations to speak for and advocate on behalf of European and American corporations; imposing or threatening to impose economic sanctions; threatening to exact revenge or retaliate for the apparent loss of revenue and income for their corporations; the threatening to withdraw development aid or suspend advantageous, preferential tariff treatment for goods entering the United States or Europe. As a species or campaign of commercial diplomacy, the European and American campaigns were well organised and orchestrated, systematic and relentless, and, broadly successful in securing the commercial income and assets of their

corporations abroad. The most prominent, if nevertheless controversial and, to some, infamous, campaign was the drafting and coming into force of TRIPS in the Global South. This section describes the basic provisions of the TRIPS agreement, explains how it affected African public health policy, and sets out the legal geography it constructed to govern the local production and global circulation of generic drugs.

TRIPS AND THE PROTECTION AND ENFORCEMENT OF TRANSNATIONAL PHARMACEUTICAL PATENTS

The history of the agreement, and the geopolitics and political economy of its enforcement, has already been analysed in the previous chapter. It is therefore enough to note the following provisions of TRIPS. The agreement brought transnational patent governance, from the World Intellectual Property Organisation (WIPO) and its Paris Convention, into the purview of, and under the auspices and jurisdiction of, the World Trade Organisation (WTO). It made the patent law of all WTO members, including nearly all African states, subject to the quasi - judicial court of the WTO (as per Part V on Dispute Prevention and Settlement), and considerably standardised or approximated global patent laws (art. 27), and required their application to be equal without discrimination as to nationality (the "national treatment" principle). The specific, exclusive and exclusionary rights of patent owners was standardised globally and specifically enumerated (art. 28); the rights of patent owners was stipulated as the quasi - monopolist power to exclude, and receive judicial remedies and criminal sanctions to stop, any person, private or public, from using, selling, importing or exporting, or generally making available to the public, patented/protected inventions without prior licence or adequate remuneration. The previously, variable lengths of patent protection were standardised (to a minimum of 20 years as per art. 33); the categories or fields of technology subject to patentability was drastically increased, to encompass "all fields of technology" (art. 27), forcing states that did not previously allow the patenting of medicines to amend their laws so as to permit it; TRIPS-signatories undertook to effectively seal off their

markets and jurisdiction from, and seize and impound, goods and artefacts (including medicines) that breached the exclusive/exclusionary patent rights of any WTO national, whether foreign or domestic—these provisions are covered in Part III of the agreement on “Civil and Administrative Procedures and Remedies, Special Requirements Related to Border Measures, and Criminal Procedures”. And, significantly, the capacity of WTO members to publicly licence the use, import, export, sale of patented technology, without prior authorisation from patent owners (compulsory licences), was made subject to WTO regulation and review (as per art.31 on "Other Uses Without Authorization of the Right Holder").

THE REGULATION OF COMPULSORY LICENCES UNDER ARTICLE 31 OF TRIPS

The issuance of compulsory licences was limited to, *inter alia*, national emergencies, which included but was not restricted to public health emergencies, such as HIV / AIDS (art. 31 (b)). In such situations, TRIPS signatories are permitted to issue, without prior authorisation from patent owners, compulsory licences to use, locally make or import, for example, patented pharmaceutical drugs; as these drugs are made without the prior authorisation of patent owners they are called generic drugs (but a fuller sense of what is meant by generics will be explored in the next chapter). However, the patent owner must receive adequate remuneration for the licence and, importantly, the compulsory licence must be temporary, subject to judicial review, non-assignable, and cannot be used for any export purposes. And, controversially, the license must be directed at "predominantly supplying the domestic market" (art.31 (f)), which means, in effect, that WTO members, facing a national health emergencies such as a lack of access to generic HIV / AIDS drugs, cannot be assisted by another WTO member if they lack the domestic, technical or financial capacity to locally make or supply the drugs. It is only the country facing a national emergency that can issue a compulsory licence, whether they have the technical or financial means to actually make generic drugs through this licence is, in many ways, of no substantive, legal import. For that matter,

according to certain sections of TRIPS (in Part III mentioned above), a WTO member, without the domestic means to locally produce drugs, must actively take steps to stop generic drugs, made by virtue of compulsory licences issued abroad, for example, from entering their jurisdiction. These steps may include such controversial acts as impounding or destroying generic drugs if requested to do so by a WTO-national with patent claims over the drugs. They may also have to take criminal proceedings against domestic nationals, government bodies and agencies and civil servants, or NGOs and patients who imported or facilitated the import of these generic drugs.

The effects of TRIPS were, among other things, the construction of a powerful and global legal space, which permitted and facilitated the capacity of European and American, multinational corporations to operate; enforce their commercial claims; increase the extractive power of their proprietary claims; and generate revenue and protect profits from licensing fees, on a massive, spatial, global scale. TRIPS therefore patented postcolonial geographies in the Global South, including Africa (as already explored in much detail in chapters four and five); in the sense that the potential or threat of proprietarising, of claiming monopolistic ownership over, and the right to extract rents from the use and circulation of, technical knowledge was ever present (Chaudhuri 2005, Coriat 2008, Babovic and Wasan 2011). It therefore created a particular type of an unequal, geopolitical and legal relationship. Since the production of patentable, technical knowledge, especially in the pharmaceutical sector, was and in many ways continues to be the *de facto* province of European and American, multinational corporations, TRIPS reinforced and extended an unequal species of structural power of colonial origin (as described in chapter four) (Fluehr-Lobban, 2000; Correa & Yusuf, 2008; Crowne, 2011; Taubman, et al., 2012; Gervais, 2012). The issue of HIV / AIDS reflected this relationship.

The vast majority of HIV / AIDS drugs were/are patented by European and American corporations. They hold the legal right to exclude literally billions of persons (nationals of WTO-member states) in the Global South from using the technical knowledge to manufacture HIV /

AIDS drugs. They hold the power to govern and regulate the flow and use of this knowledge across a huge, spatial and jurisdictional expanse. Thus, for much of the 1990s and early 2000s, African countries, lacking adequate access to affordable HIV drugs, and lacking the domestic technical and engineering capacity to make them locally, could only legally procure patented drugs from Europe and the United States. Other countries in the Global South, with the means to produce these drugs (such as India as we shall see below), could not export them to Africa by issuing compulsory licence of their own.

Furthermore, since the cost of these drugs was about \$10-20, 000 per year, and African states lacked the financial means to publicly procure them for their citizens, and European and American states refused to offer support, the full burden of paying for treatment fell on individual, African patients; the vast majority lived with less than \$2 a day, but, according to this state of affairs, they were expected to find the means to pay for drugs that cost \$10-20, 000 per year for the rest of their lives. Unsurprisingly, for much of the 1990s, only one or two percent of seropositive Africans had access to treatment; this number increased to three percent by 2003 because of the activities of UN agencies as described below (Schwartländer & I. Grubb, 2006).

THE POLITICAL ECONOMY OF EARLY PROGRAMMES TO IMPORT GENERIC HIV/AIDS DRUGS INTO AFRICA

This section traces the early multilateral projects to export generic drugs to Africa and investigates how transnational patent governance influenced their operation and the activities of NGOs and generic manufacturers that participated in them. The earliest attempts at importing HIV / AIDS drugs into Africa took place in late 1990s. Given the fiscal and financial position of African states during this period, and the history of African opposition to HIV/AIDS programmes in Africa, their participation was peripheral and secondary. The major players were UN-agencies, the WHO and UNAIDS, and major Euro-American NGOs, such as Médecins Sans Frontières (MSF) (Schwartländer & I. Grubb, 2006). However, these early programmes made little effort to

challenge or problematise the global, geolegal space that TRIPS constructed. The programmes were established and justified through a discourse about patents and proprietary rights. They were negotiated as if they were simple commercial deals; a great deal of attention went into agreeing acceptable licence agreements and supply contacts. The issue or question about the lack of access to treatment in Africa was narrowly discussed as a patent problem.

Most NGOs, UN-agencies, including UNAIDS, subscribed to this position. One must search hard to find any instances of the patent issue being raised before the late 1990s and early 2000s (PanAfrican News Agency, 1997). UN-programmes were run so to enforce and not challenge patent rights. Negotiation over price was the norm. Bracketing geopolitics, not engaging with the traces and remnants of colonial life (as discussed in chapter four), was common practice. The World Health Organisation's Drug Access Initiative (DAI) and UNAIDS' Accelerating Access Initiative (AAI) are good examples—and the first serious attempts at the bulk importation of HIV / AIDS drugs into Africa.

In 1997, the WHO established its access to treatment programme: the Drug Access Initiative (DAI). Through this initiative, the WHO negotiated, without official African participation, with Euro-American companies for the supply of discounted drugs for its operations in Africa (Schwartländer, et al., 2006)). The agreements were based on a form of tiered pricing called differential-pricing contracts; a geo-legal technique where companies agreed to price their products differently according to place or geographies of sale (Nattrass, 2008). However, the price reductions negotiated were modest. And, the DAIs, by the WHO's own admission, had very limited success.

A year of first-line HIV/AIDS drugs were to be supplied to the WHO at about \$ 7200. When the scheme was rolled out, at first, in Uganda (one of the first African countries to cooperate intensively with UNAIDS) recipients of DAI-drugs paid 100 percent of the purchasing cost (UNAIDS, 1998; Schwartländer & I. Grubb, 2006). Not surprisingly, the dropout rate for DAI

schemes was high. Similar things happened in Ivory Coast: out of the 2144 people that passed through its eligibility screening process, only 649 people received HIV/AIDS drugs after 4 years of the scheme. By 2003, as indicated above, only three percent of seropositive Africans were receiving HIV/AIDS drugs. The DAIs were, understandably, presented and seen by many, particularly NGOs and the transnational HIV/AIDS-activist network, as a dismal failure (Schwartländer & I. Grubb, 2006).

The next scheme did, somewhat, comparatively better. UNAIDS, having taking over WHO's Special Project on AIDS as described in chapter two, initiated its Accelerating Access Initiative (AAI) in 2000. After negotiating with Euro-American companies, UNAIDS and its partners received further reductions in the price for HIV/AIDS drugs: as with the DAI, five major, euro-American companies (Boehringer Ingelheim, Bristol-Myers Squibb, GlaxoWellcome, Merck & Co, Inc and F. Hoffman-La Roche) reluctantly agreed to charge UN-agency-funded programmes, and certain NGOs, such as Médecins Sans Frontières, approximately \$1200 per treatment, per year for a first-line HIV/AIDS drugs imported in Africa (Schwartländer & I. Grubb, 2006). However, these prices were agreed on the condition that each African state would individually and separately undertake to guarantee the patent rights companies supplying the drugs. Although comparatively better than the DAIs (35, 500 seropositive Africans received HIV/AIDS drug directly, or indirectly, through AAI schemes by 2003), the reception and judgment of the AAI within the transnational, HIV/AIDS network was, if not negative, than lukewarm (Schwartländer & I. Grubb, 2006).

As one prominent campaigner, Justice Edwin Cameron, said at the 16th International Aids Conference at Durban, July, 2000: "From every side...millions of people living with AIDS in resource-poor countries [were] disappointed with the previous strategy...international agencies, national governments, and especially those who [had] primary power to remedy the iniquity - the international drug companies - have failed [them] in the quest for accessible treatment." (Bond,

p.176) He was not alone. Even the then-UN Secretary General, Kofi Annan, publically acknowledge that, the international response “so far [had] failed Africa”. (ibid.)

It was becoming clear that narrow problematisations and negotiations around price only took things so far. There was a wider actant at play. A bigger issue hanging over DAI and AAI schemes: the Geography of Power, the geo-legal and regulatory space, constructed by TRIPS in Africa and elsewhere. This became evident in late 1990s and early 2000s when African states either did or attempted to write new patent laws so as to facilitate the production, importation, and circulation of generic HIV/AIDS drugs in their territories.

SOUTH AFRICA AND CONTESTATIONS OVER ACCESS TO GENERIC DRUGS IN AFRICAN STATES

A good example is South Africa. In the late 1990s, after the formal end of apartheid, the South African government engaged in an ambitious campaign, “The Reconstruction and Development Programme”, to address the highly racialised and unequal geography of health-care provision in South Africa (African National Congress, 1994; Foster, 2005). It was a package of reforms aimed at tackling the shadows and remnants of colonial experience (Susser & Cherry, 1982; Beer, 1986; Price, 1986; Nightingale, et al., 1990; Swanson, 1995). Among many other reforms on a wide array of subject matter, the government amended its patent law—the Medicines and Related Substances Control Amendment Act, 1997— so as to grant the health ministry, *inter alia*, the power and discretion to, in effect, import generic HIV/AIDS drugs and/or issue compulsory licenses for their local production; UNAIDS and, the US Census Bureau’s Country Profiles, identified black South Africans as the largest, seropositive population of South Africa and, because of their low-income, as the population with least access to affordable treatment—not just for HIV/AIDS drugs, but, other pharmacotherapeutic categories.

Within the context of the TRIPS-agreement, however, such acts were suspect. It appeared to Euro-American companies, to the co-authors of the Framework Document for TRIPS (see previous chapter), that South Africa was attempting to pierce holes in the sealed, patented space that TRIPS was specifically designed to construct (Mcneil, 1998; Scott, 2006). Instead of impounding generics and going after domestic industries that sought to make or import them, the South Africa government (or, more specifically, the new black, government of Nelson Mandela) was attempting to facilitate the circulation of generic and illicit contraband not just within its borders, but across transnational space, especially between it and other post-colonial geographies; the Amendment Act aimed to facilitate imports, most likely from India (Mcneil, 1998), where, because of India's Import-Substitution-Industrial programmes, and the imposition of local working requirements, and the differential application and enforcement of patent law in the chemical and pharmaceutical sector from the 1950s to early 1990s, a burgeoning, generic, manufacturing industry had emerged by 1970s, reaching approximately 20, 000 manufacturers by the late 1990s (Spevack, 1966; Narayana, 1984; Saxena, 1988; Cavale & Katarki, 1996; Finston, 2002; Chaudhry, 2006). (These manufacturers, this industry, would in time, do much, as we shall see, to destabilise the Euro-American dominance in the manufacture and export of HIV/AIDS drugs).

The response of Euro-American associations to the Amendment Act was quick as it was daring. A consortium of forty or so companies, holding the vast majority of patents in South Africa, including many previous members of the Committee that formulated the Draft Document for TRIPS—such as, SmithKline Beecham, Eli Lilly, Merck & Co, Johnson & Johnson, Pfizer, Bristol-Myers Squibb—took legal action against the South Africa government (Pharma Marketletter, 1997; Pharma Marketletter, 1998). Deploying legal remedies provided by TRIPS as described above, and discourses about patents as a form of private property, they argued that the South African law breached provisions of the TRIPS agreement. Specifically, that the government

sought to differentially treat pharmaceutical patents (like post-colonial governments did in the bad days of the 1970s and early 1980s and the Lagos Plan) and neglect its obligations under TRIPS to intervene, to deploy its criminal and judicial apparatus, to clean its local space of illicit, generics (Pharma Marketletter, 1998).

In other words, the problem was not government intervention, *per se*, but government intervention to open spaces of illicit circulation and accumulation; relatedly, the type of government intervention that would, potentially, limit the extraction of commercial value from post-colonial geographies, not just South Africa, but, other markets in Africa, Asia, and Latin America (Mcneil, 1998). Whereas the South African government problematized and presented its patents and its reformed law as an exercise of territorial sovereignty, as a right by a sovereign state to decide and place conditions on the scope of its grant of monopolistic privileges, Euro-American associations, on the other hand, situated the reform along discourses about private property, and an imaginary about post-colonial geographies as places of risk; in other words, South Africa was viewed as another geography of difference that needed extra-territorial discipline.

Euro-American states, especially the British and American governments, entered the fray, siding squarely with their commercial associations (Agence France Presse, 1998; Roberts, 1998). The American government, from an application made by the Pharmaceutical Research and Manufacturers of America (PhRMA), warned the South African government that was being investigated for a Section 301 listing (the examples, South Korea, Singapore, Mexico, and, recently, Brazil were precedent)(Barber, 1999; Caelers, 1999; Palast, 2000). British and American delegations were sent to South Africa: Official phone calls, communiques, and statements were released: All cautioned the government against “politicising” the dispute. All called on the government to respect and discharge its legal obligation. All warned against dragging the memory colonial life and apartheid experience into the dispute. These issues had to be bracketed (Agence France Presse, 1998; Barber, 1999; Caelers, 1999; Palast, 2000). Instead, the dispute and the acts of Euro-

American corporations were to be seen as a simple, contractual and commercial negotiation (as described above and implied in the WHO and UNAIDS schemes). Accordingly, the central and relevant questions were not about geography of power instituted by TRIP, but, South Africa's commitment to upholding its obligations under national and international law.

THE INTRODUCTION OF GENERIC HIV/AIDS DRUGS FROM INDIA: CIPLA, TECHNO-NATIONALISM, AND INDIA

The dispute intensified in 2001 when an Indian, generic manufacturer, the Chemical, Industrial & Pharmaceutical Laboratories (CIPLA), offered to supply African governments, UNAIDS, NGOs, and etc. with HIV/AIDS drugs for their operations in Africa, including for UNAIDS' Accelerating Access Initiatives. It offered to sell its products at "a humanitarian price" as part its "contribution to fighting Aids"; offering to supply a first-line of HIV/AIDS drugs for \$600 (£430) to governments and \$350 to Médecins sans Frontières and UN-agencies; when compared to the \$1200 UNAIDS was receiving from Euro-American companies, CIPLA's offer was not negligible (Harding & Boseley, 2001; Boseley, 2001; Dipika Jain & Stephens, 2008).

As already explained in chapter four of this thesis, CIPLA, like many other generic manufacturers that came to prominence in the early 2000s, was the product of Import-Substitution-Industrialisation, local working requirements, and the differential application and enforcement of patent laws. That is to say, it came out of the type of state-led and coordinated programme of industrialisation that the Lagos Plan was based on (as elaborated in chapter four). From the 1950s to the mid-1990s, post-colonial governments of India committed themselves to techno-nationalism, self-sufficiency, and the establishment and/or upgrading of the technical knowhow and engineering capacity of its manufacturing sector; in many ways, India's model of import-substitution was one of the most radical forms, based on a rigid and comprehensive regime of import-licensing, high-tariffs, state-subsidies, and detailed central plans, usually five years in

duration, by the state—a system Chakravarti Rajagopalachari called, pejoratively, the “Permit/Licence Raj”, suggesting the seemingly, pervasive presence of the state in commercial and industrial activity (Erdman, 2007). Chemical and Pharmaceutical engineering took special place and significance in this programme (Chaudhuri, 1984) (Ministry of Petroleum & Chemicals, Government of India, 1975; Barker & Mitra, 1980; Barker & Mitra, 1981; Federation of Medical Representatives Association of India, 1986; Ahluwalia, 1988). Deploying fully the flexibilities available to it through the Paris Convention, state laboratories and institutes, pharmaceutical manufactures and infant industries were protected by the state.

This was done through a wide-range of methods, such as the formation of a comprehensive import licensing system and the imposition of a high tariff schedule for imported goods, and the promulgation of a patent regime that provided wide scope for compulsory licensing, and treated pharmaceuticals and chemicals, along with foodstuff, differently from other forms of technology (Ahuja, 1997); that is, by only recognising and enforcing patents for the techniques and methods, the engineering processes or procedures, of manufacturing pharmaceutical compounds. The chemical entities themselves, the “stuff” of medicines, with some exceptions, were not patentable. Accordingly, an impressive, pharmaceutical manufacturing industry grew by the 1950s and 1960s, and, expanded and diversified rapidly by the 1980s and 1990s. It specialised in finding ways to “engineer around” patented processes; finding ways to develop alternative methods of compound formulation (Pai, 1972; Watal, 1996; Ahuja, 1997; Naik & Khan, 1997; Tikku, 1998; Barnes, 2002; Ganguli, 2003; Gupta, 2004; Singh, 2005; Kapczynski, 2009).

It was from this regulatory regime and post-colonial moment that companies such as CIPLA flourished. The Indian state developed and strengthened the technical capacity and network, epistemic community, and know-how for Indian engineers to work around patented—mostly, Euro-American— compounds; much like other Asian states, such as South Korea,

Singapore, Brazil, Mexico, and etc. we're doing before the Section 301 actions. In short: as we have seen, it permitted CIPLA and other Indian manufacturers to, for example, engineer or work around the patent claims of Euro-American companies over HIV/AIDS drugs. It permitted it to manufacture and then offer to export the first, generic HIV/AIDS drugs in the late 1990s and early 2000s. The offer of 2001 was, therefore, a final product of years of state nurturing and intervention.

PART TWO: TRIPS REFORMS AND THE REGULATION OF COMPULSORY LICENSES AND THE EXPORT/IMPORT OF GENERIC DRUGS IN THE GLOBAL SOUTH

This final part describes the package of reforms agreed in the early 2000s to amend the TRIPS agreement and its regulation of the issuance of compulsory licences and the importation of generic drugs at times of national emergency. It particularly focuses on the political economy of the reforms and their extraterritorial reach and governance of the circulation of generic drugs within, between, and across countries of the Global South.

The offer from CIPLA triggered, or at least significantly contributed towards, a whole set of events. UNAIDS and other UN-agencies, African states, and NGOs, such as Medicine Sans Frontier, operating in Africa had to consider and take position on CIPLA's offer. The transnational media got involved. The offer was reported and debated widely. The geo-legal spaces and techniques constructed and deployed by TRIPS, respectively, not just in Africa, but in other post-colonial states, became a hot issue (Harding & Boseley, 2001; Boseley, 2001; Dipika Jain & Stephens, 2008). Many started asking: why should only Euro-American artefacts be permitted to circulate in Africa? Why, given Africa's central place in Euro-American campaigns on HIV/AIDS, should Africans be denied access to (apparently) affordable treatment and the capacity to produce locally? Thus, the president of the International AIDS Society, Joep Lange, at the 14th

International AIDS Conference in Barcelona in July, 2002, asked delegates at the conference: “if we can get cold Coca Cola and beer to every remote corner of Africa, it should not be impossible to do the same with drugs”. The Director General of the WHO went step further and asked delegates at the 14th conference:

...does anyone deserve to be sentenced to certain death because she or he cannot access care that costs less than US\$2 a day? Is anyone's life worth so little? Should any family become destitute as a result? Should children be orphaned?...The answers must be no, no, no and no!... Yet this is what is happening every day. (Schwartländer, et al., 2006, p.541)

Contestations over the CIPLA offer fed directly into the South African case. For some, this was part of a wider picture and struggle. TRIPS, the South African case, the reluctance of UNAIDS and other NGOs to accept CIPLA's offer, was symptomatic of a growing trend: the unleashing of global capital, the extra-territorial extension and consolidation of Euro-American power, across the world by the World Trade Organisation (WTO), or, rather, the “WTO project”. Contestations about TRIPS and the South African case took place at time when the WTO's “single-undertaking”, its package of trade agreements across multiple areas of trade, of which intellectual property was merely one, was being challenged. Condemnations, accusations, protestations, and reservations of all types were expressed by environmental, labour, feminist, Marxist, anarchist groups. A global coalition quickly coalesced around challenging the WTO, around exposing its “neo-colonial” and “imperialist” tendencies. The issue of access to generics, the geography of power constituted by TRIPS, the extra-territorial techniques of this agreement, and the power it gave the WTO to survey and discipline post-colonial states, became a cause célèbre for these groups. They typified everything that was wrong and oppressive about the world and the geo-political, economic, and legal spaces that WTO had constituted. They were traces of colonial life. They were the effects of colonial experience that needed to be confronted (Wallach,

et al., 1999; Shepard, et al., 2002; Jones, 2004; Jawara & Kwa, 2003; Halbert, 2005; Coriat, 2008; Narlikar, et al., 2012; Wood, 2012).

Within this context, UNAIDS campaigned to expand its Accelerating Access Initiatives in Africa. It, and coalition of NGOs and Group of 77 members, worked hard at UN forums (much like Group 77 member did in the 1960s, 1970s, and 1980s). They organised special sessions of the UN-General Assembly and Security Council, they sponsored and passed resolutions calling for more access to treatment—which was a code word for generics. By the early 2000s, the UN, not just UNAIDS, was committed to increasing access (Schwartländer, et al., 2006). For the first time, the idea of “universal access” was, apparently, taken seriously. That is, the project to provide pharmacotherapy to all sero-positive populations (and, as we shall see in the next chapter, this project would create its own geography of law and power).

LIMITATIONS OF THE TRIPS AND THE CONTINUING STRUGGLE IN THE SOUTH OVER CONTROL OF PHARMACEUTICAL PATENTS AND COMPULSORY LICENSES

With the South African case and CIPLA's offer in the background, the WTO's Ministerial Conference of 2001 was held in Doha, Qatar. Much like the 1970s and 1980s call for a New International Economic Order, and the campaign by to revise the Paris Convention (see chapter four), the governments of the Global South revived their project for the principle of territoriality, for the power to decide on patentability and compulsory licensing, to be more closely tied to the exercise of sovereign power (Correa & Yusuf, 2008; Pogge, et al., 2010; Fairman, et al., 2012). There were no calls for local working to be brought back, nor were there calls for TRIPS-signatories to be given the power to differentially apply and enforce patent law (as discussed in chapter four). There were, however, requests for governments to have wider discretion under art.31. Specifically, the right for one country in the Global South, such as India, with the technical

capacity to make generic HIV / AIDS drugs, to issue a compulsory licence and export them to another country, such as Mali, without the capacity to do so but facing international health emergency; in other words, for generic manufacturers such as CIPLA to be able to supply African states and UNAIDS with generic drugs. So, the enclosing of post-colonial geographies by TRIPS was asked to be relaxed. The power and discretion of TRIPS-signatories to declare national emergencies and issue compulsory licenses to locally make or import generics was proposed and agreed. In addition, in this respect, the Ministerial Declaration on the TRIPS Agreement and Public Health (Doha Declaration) has received much attention and comment.

The Doha Declaration mostly dealt with the problems of art.31 discussed in section two above. Its operative parts provide guidance as to how WTO-members intended art.31 to be interpreted should the acts of a member state be brought for judicial review domestically or through the WTO's, quasi-judicial, Dispute Settlement Body. Its drafting was the accumulation of wide spread and global protests against the types of legal suits that were brought against the South African government, and other governments in Asia and Latin America, by European and American, multinational corporations. Although legally, it was merely persuasive, and still required a decision to be passed to give it effect, and potentially provide a basis of upon which art.31 could be amended (as done later), its declarative impact was, nevertheless, noteworthy.

The Declaration, *inter alia*: "...affirm(ed) that... (TRIPS)...should be interpreted and implemented in a manner supportive of WTO members' right to protect public health and, in particular, to promote access to medicines for all." Furthermore, WTO members recognised that "each member has the right to grant compulsory licences and the freedom to determine the grounds upon which such licences are granted". And, relatedly, the Declaration acknowledged that: "each member has the right to determine what constitutes a national emergency or other circumstances of extreme urgency, it being understood that public health crises, including those

relating to HIV/AIDS...and other epidemics, can represent a national emergency or other circumstances of extreme urgency."

Although the Doha Declaration has been, for obvious understandable reasons, often and widely applauded, the decisions, proposed amendment to art.31, and annex to TRIPS that followed to give it legal effect were, nevertheless, problematic. Two Decisions were passed: the Decision of the General Council of 2003 on the Implementation of paragraph 6 of the Doha Declaration (The Implementation Decision); and the Decision of 2005 on the Amendment of the TRIPS Agreement (The Amendment Decision and Protocol). What the Decisions and Protocol did was to construct a geo-regulatory typology or bifurcation of the Global South. These countries were divided into "eligible" exporters and importers of generic drugs for regulatory purposes, based upon the perceived risk that they posed to European and American commercial interests in the global pharmaceutical market. Those posing the least risk, with the weakest technical and pharmaceutical capability, and thus less likely to locally manufacture generic drugs, were given more flexibility. Those that were potentially likely to locally manufacture or export generic drugs were placed under the most stringent discipline and supervision.

To understand what this means, and as will be explained more fully in the next chapter, one needs to understand the different types or categories of pharmaceutical, manufacturing capability that exists in Africa. This can be done by breaking down African, pharmaceutical industries according to their primary, secondary, and tertiary capacity. Tertiary production relates to the packaging and labelling of finished products or repackaging of bulk finished products; secondary production is about the manufacturing of finished dosage forms from raw materials and excipients; whereas primary production relates to the manufacture of active pharmaceutical ingredients and intermediates from basic chemical and biological substances (these substances are usually patented and they also account for 60 percent of the cost of manufacturing drugs and

constituted the bulk of goods that Africa purchases abroad because it completely lacked a domestic capability). Along those lines, the African Union has noted the following about Africa:

Assessment of local production of medicines in some African countries (in the WHO African Region) indicated that out of 46 countries, 37 have pharmaceutical industries, 34 have secondary level production and 25 have tertiary production. Only one (South Africa) has limited primary production. Nine countries have no production capacity...(African Union, 2007, p.2)

Accordingly, for those in the “Least Developed” category of the WTO’s Decision (those with no production capacity or in the tertiary category), some of the provisions of TRIPS (Sections 5 and 7 of Part II) were temporally waived, but made subject to periodic review and potential termination. That is to say, Least Developed Countries are almost, entirely taken out of the patent protection regime—particularly sections on pharmaceutical patents—and TRIPS-signatories are estopped from relying on the breach of those sections to take legal or retaliative action (through the WTO’s Dispute Settlement procedure) against them. However, these waivers, and the special and differential treatment afforded to Least Developed Countries, are, mostly, immaterial as these countries lack the technical capability to actually, locally manufacture generic drugs—they can only import them, especially the active pharmaceutical ingredients, from abroad. As the definition of “least-developed countries” is provided in the Decision of 2005, they are those WTO members that have “insufficient or no manufacturing capacities in the pharmaceutical sector”. For these countries, they pose a risk to the commercial interests of European and American corporations only insofar as they are potential export markets for generic drugs manufactured elsewhere; most likely from the Global South, from such countries as India, China, Brazil, and South Africa (the legal regime under which generic manufacturers function in the United States and Europe is quite stringent and it is therefore very difficult to manufacture generic drugs in such places before the expiry of the original patent over a given drug). For those “developing countries” that that have a

strong secondary, pharmaceutical industry, and especially South Africa with primary capacity, they are required to notify the WTO of their intention to import generic drugs through compulsory licences and they are required to prove that, and be assessed in terms of whether, they lack the capacity to locally make generic drugs—but, unlike Least Developed Countries, their obligations with respect to Sections 5 and 7 of Part II of TRIPS are not waived.

Accordingly, the Decision and Protocol places much more control on potential exporting states. To export a generic drug to a least developed country, the Decision requires that (as per the proposed annex to TRIP):

(a) the eligible importing Member(s) has made a notification to the Council for TRIPS, that:

(i) specifies the names and expected quantities of the product(s) needed;

(ii) confirms that the eligible importing Member in question, other than a least developed country Member, has established that it has insufficient or no manufacturing capacities in the pharmaceutical sector for the product(s) in question...; and

(iii) confirms that, where a pharmaceutical product is patented in its territory, it has granted or intends to grant a compulsory licence in accordance with Articles 31 (as amended by the proposed 31bis of TRIPS...; and

(b) the compulsory licence issued by the exporting Member under the system shall contain the following conditions:

(i) only the amount necessary to meet the needs of the eligible importing Member(s) may be manufactured under the licence and the entirety of this

production shall be exported to the Member(s) which has notified its needs to the Council for TRIPS;

(ii) products produced under the licence shall be clearly identified as being produced under the system through specific labelling or marking. Suppliers should distinguish such products through special packaging and/or special colouring/shaping of the products themselves, provided that such distinction is feasible and does not have a significant impact on price; and

(iii) before shipment begins, the licensee shall post on a website the following information:

— the quantities being supplied to each destination as referred to in indent (i) above; and

— the distinguishing features of the product(s) referred to in indent (ii) above;

(c) the exporting Member shall notify the Council for TRIPS of the grant of the licence, including the conditions attached to it.⁹ The information provided shall include the name and address of the licensee, the product(s) for which the licence has been granted, the quantity(ies) for which it has been granted, the country(ies) to which the product(s) is (are) to be supplied and the duration of the licence. The notification shall also indicate the address of the website referred to in subparagraph (b)(iii) above.

For the importing state, which is more likely to be a least developed country with no capacity or a low tertiary pharmaceutical base, the obligations are to contain the exported generic drugs within its country and jurisdiction along the lines and means provided by Part III of TRIPS

(on “Civil and Administrative Procedures and Remedies, Special Requirements Related to Border Measures, and Criminal Procedures”). The requirements are that, *inter alia*:

...eligible importing Members... takes reasonable measures within their means, proportionate to their administrative capacities and to the risk of trade diversion to prevent re-exportation of the products that have actually been imported into their territories under the system. In the event that an eligible importing Member that is a developing country Member or a least-developed country Member experiences difficulty in implementing this provision, developed country Members shall provide, on request and on mutually agreed terms and conditions, technical and financial cooperation in order to facilitate its implementation.

Moreover, for non-importing states that know that generic drugs, manufactured under compulsory licence, have entered their jurisdiction, they are required to:

...ensure the availability of effective legal means to prevent the importation into, and sale in, their territories of products produced under the system and diverted to their markets inconsistently with its provisions, using the means already required to be available under this Agreement. If any Member considers that such measures are proving insufficient for this purpose, the matter may be reviewed in the Council for TRIPS at the request of that Member.

The Decision, Protocol, and Declaration therefore construct and deploy space as a geo-legal and regulatory technique. By placing Least Developed and Developed States into special and differential categories—in effect, othering them and operating through a dynamics of difference—they do not so much free them from TRIPS obligations as they discipline them through other means. Least Developed geographies are granted waivers that have minimal effects in their capacity to locally make generic drugs whereas Developing Countries are granted discretions that are

subject to much monitoring and control. In each case, the aim is to regulate the circulation of generic drugs across post-colonial geographies. The typologies and geo-legal spaces are constructed a means to tailor control and discipline.

Not surprisingly, not many African states succeeded in deploying what came to be designated “TRIPS-Flexibilities”; the package of Decisions and Declarations on TRIPS and Public Health promulgated at Doha. Although some tried (e.g., Zimbabwe, Mozambique, Rwanda, Ghana, Zambia), and many took steps to amend their laws along TRIP-Flexibilities, the attempts were usually short-lived or symbolic. That is, no generic drugs were actually made or imported (as with Zambia and Cameroon) or, where imported (as was the case in Rwanda and Zimbabwe), the schemes were of very limited scope and duration. Instead, as we shall see in the following chapter, something else happened: Africans states were largely sidelined in the production, importation, and procurement of generic HIV/AIDS drugs into Africa. UNAIDS and Euro-American NGOs, charities, foundations, and, new international financing funds, such as the Global Fund to Fight AIDS, Tuberculosis and Malaria (The Global Fund), and etc. came to dominate.

TRIPS REFORMS AND THE GOVERNANCE OF STATES WITH PHARMACEUTICAL CAPACITY

The regime of governing the transnational flow of generic drugs, created by the Doha Declaration and its subsequent Decision and Protocol, set out a general theme that would reappear in the multilateral system to regulate the procurement and movement of generic drugs going to Africa or coming from the Global South: goods, artefacts, and knowledge coming from or circulating between countries of the South (generally, post-colonial geographies) would be governed through regulatory discourses and geo-legal techniques and typologies of risk. The Doha regime, established the basic precedence of problematizing and regulating artefacts and knowledge from the Global South as risky and other, of dividing the world into a spatial typology of normality

(i.e. Europe and the United States) and abnormality (i.e. Africa and the South) and that inform where and how particular artefacts and knowledge travel.

In the case of the Doha regime, for example: although it technically applies to all WTO members, in that any member with insufficient capacity in the pharmaceutical sector can use the system to import generic drugs, in practice, however, it's more likely to affect and govern the activities of governments in, and generic drugs flowing between countries of, the Global South. The flows and activity more likely to be viewed as unlawful and illegitimate will be those from the South. Since the overwhelming majority of pharmaceutical patents registered in many countries in Africa continue to originate from Europe or the United States, for example, it is highly unlikely that African nationals will be taking actions (as envisioned in Part III of TRIPS) to stop the flow, to ask for the impounding or seizing of generic drugs, manufactured in or flowing between Europe and the United States. The concerns about the flow of generic drugs suggested in the Decision and Protocol, the fear of illicit generic drugs flowing between countries, is structurally and institutionally based upon a typology of the South and West and the application of different regimes of regulation and geographies of power to each, distinct space. Goods from the West can flow and travel almost anywhere in the Global South, and extract rents and income from licence fees as they move, whereas artefact from the South, and the political decisions of its government, including in such important areas as public health policy, are the subject of much regulation and suspicion and various techniques of discipline. The geopolitical politics around the circulation and movement of generic drugs will be explored again in the following chapter on the WHO Prequalification Program for Generic HIV / AIDS drugs.

CONCLUSION

Disputes about access to affordable, generic HIV / AIDS drugs in Africa took place within a geopolitical context where African states were, broadly; hollowed-out, weak and under the discipline of foreign creditors and a global legal geography or regime instituted by TRIPS that

subjected their political decisions and choices to external control and influence. The production and circulation—the importation and export—of HIV / AIDS drugs took place within that unequal, structural and global order. Drugs could not circulate freely, they were embedded within wider networks and practices of legal power.

The geo-legal space constructed by TRIPS considerably impacted early projects, by UNAIDS and African governments, to locally make and/or import generic HIV/AIDS drugs into Africa. TRIPS had a specific and particular interest in space, in regulating and governing through space, in constructing patented spaces and enclosed legal geographies in post-colonial states. The aim was to carefully monitor and govern not only the accumulation and circulation of generic artefacts within, but between and across, post-colonial geographies. That is to say, the aim was govern extra-territorially through the construction of geo-legal and regulatory spaces.

The Doha package of reforms (the Declaration and Decisions) did not substantively ameliorate the situation. In some ways, it reinforced the geography of power and difference brought about by TRIPS. The geo-regulatory techniques deployed, the geo-legal typologies used in the Decisions to stratify and govern the use compulsory licenses and circulation of generic drugs—i.e., of Developing and Least Developing Countries—were another technique of extra-territorial governance. The typologies placed African states with techno-scientific capacity to make generics into special regimes of extra-territorial control whereas those without capacity were left without the means for self-actualisation while being presented as emancipated. Because of these reasons the Declaration and Decisions were, largely, superfluous and redundant—at least if viewed or measured in respect to expanding spaces for emancipatory action.

**CHAPTER SIX: WHO PREQUALIFICATION PROGRAMME AND
THE GLOBAL GOVERNANCE AND CERTIFICATION OF GENERIC
HIV/AIDS DRUGS IN AFRICA**

After the Doha package of reforms, a multilateral funding and regulatory regime for the procurement and certification of HIV / AIDS drugs—in terms of their licensing, quality, safety, and therapeutic efficacy—emerged in the mid-2000s. Established and funded mostly by European and American governments, and a network of wealthy charities and foundations (such as the Bill and Melinda Gates Foundation) that were established during this period, the regime quickly grew in scale, and enclosed a great many African, pharmaceutical manufacturers and industries within its institutional, regulatory system and technical practices. This chapter examines how this regime was established and unpacks the regulatory structure and techniques that it deployed to govern the movement, local production and importation, of generic drugs not just to Africa, but also to countries of the Global South. It also explores the impact that it had on the ability of African, pharmaceutical manufacturers to locally make generic drugs and participate in the regime's procurement programmes for generic drugs.

The focus, however, is on two multilateral programmes: The WHO's Prequalification Program for Generic HIV / AIDS drugs (the "Prequalification Programme") and the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund). Their procurement and quality assurance policies for pharmaceutical drugs are examined and the regulatory requirements that they have placed on generic manufacturers to participate in their sponsored and funded programs is investigated. Rather than engaging in a cost-benefit analysis or evaluating the effectiveness of this multilateral regime, as is already and regularly done and published by audit reports and performance evaluation from the Global Fund and other European and American governments, the focus is on the regulatory techniques themselves and their structural effects on the governance of generic production and governance in Africa—and, by extension, other places in the Global South where these rules reach.

Theoretically, however, the interest is mostly on how both programmes, but more specifically the Prequalification Programme, have deployed technical, documentary practices and

geo-regulatory techniques (i.e. the certification and inspection of pharmaceutical manufacturing facilities, analytic laboratories, and clinical centres to establish the bioequivalence of generic drugs) as a multilateral, governing system. Drawing from Legal Geography and Science and Technology Studies scholarship, specifically Gieryn's concept of Truth-Spots, it unpacks procedures to certify these facilities and laboratories as regulatory Truth-Spots. As the production of technical documentation is also linked to these places (all documents submitted to prequalify drugs and manufacturers, and establish bioequivalence and the quality of generic drugs, must come from these certified places), the regulatory and institutional significance of documents is also investigated.

The chapter is divided into three parts. The first part describes the early attempts by African states to locally manufacture generic HIV / AIDS drugs in the early 2000s, and traces the institutional emergence of the Global Fund and the Prequalification Programme. The second part concerns itself with theoretical issues; specifically, the significance of technical, documentary practices and regulatory sites as a governance technique. The third part narrows its focus on these techniques through an analysis of the Prequalification Programme's "Product Dossier", "Common Technical Document", and certification procedures for Good Manufacturing Practices (GMPs) facilities, Good Laboratories Practices (GLPs) laboratories, and Good Clinical Practices (GCPs) centers.

The chapter does not argue that these technical standards are not needed. Rather, it argues that and highlights how the documentary practices of the WHO's Prequalification Programme, and its certification procedures for manufacturing and laboratory facilities, have emerged as a significant, institutional regulatory system with considerable influence in: the economic and productive activities of African pharmaceutical manufacturers: the procurement operations of UN-agencies and NGOs; public health and industrialisation policies of African states. It contends, further, that the failure of many African pharmaceutical manufacturers to satisfy the Prequalification's requirements suggest wider problems about the capacity of African

states/industries to locally provide affordable access to essential medicines and to effectively respond to future health emergencies of similar magnitude to HIV / AIDS.

PART ONE: AFRICAN ATTEMPTS TO LOCALLY MANUFACTURER

GENERIC HIV / AIDS DRUGS

In this section, the national and regional attempts of African governments to locally manufacture generic HIV / AIDS drugs after the Doha reforms are examined. The links between these attempts and regional, industrialisation plans is also investigated.

The Doha Declaration made it plain that TRIPS-signatories, facing a national health emergency such as HIV / AIDS, but lacking access to affordable drugs, could issue compulsory licences to locally manufacture generic drugs— they could licence the use of a patented invention without the prior authorisation of its patent owner, subject to some qualifications. Accordingly, in the early to mid-2000s, the governments of Zimbabwe (2002), Mozambique (2004), Cameroon (2005), Eritrea (2005), and Ghana (2005) issued compulsory licenses to locally manufacture drugs (World Health Organization, 2014). And, within the same period, regional, sub regional, and national plans were promulgated to manufacture, or established the technical capacity to manufacture, drugs in Africa. The main ones were: the African Union’s Pharmaceutical Manufacturing Plan for Africa (PMPA); and the East African Regional Pharmaceutical Manufacturing Plan of Action (EAC-RPMPoA) (African Union, 2009).

Out of all of them, the African Union’s PMPA (“Union Plan”) was the most noteworthy; at least in terms of the number of countries that participated in it and the level of institutional commitment that was put towards realising it. The Union Plan grew from a Decision, and Declaration (the Gaborone Declaration) passed at an African Union Summit in January 2005. In the Declaration, African governments acknowledged that their lack of domestic capacity was a regional problem that impacted their ability to effectively respond to HIV / AIDS, to treat their

populations, and more generally, to respond to all the other health challenges that they faced, not just about HIV / AIDS, but with respect to access to essential medicines and a wide range of other “neglected African diseases” that disproportionately affected Africans. The lack of access to HIV / AIDS was, therefore, suggestive of a bigger problem that went beyond merely the question of HIV / AIDS. By building a capable pharmaceutical compatibility, and developing the domestic expertise and infrastructure in this sector, African states would have the technical means to address the multiple and Afro-centric health challenges that faced without necessarily depending on the generosity or intervention of Euro-American states. Accordingly, the Decision called on the AU Commission to formulate a plan “to pursue... the local production of generic medicines on the continent and to making full use of the flexibilities within the Trade and Related Aspects of Intellectual Property Rights (TRIPS) and DOHA Declaration on TRIPS and Public Health”.

After the Union Summit, the AU Commission did indeed formulate a plan: the Union Plan. The plan is an interesting policy document. The HIV / AIDS issue may have been the immediate reason for its formulation, but the plan clearly connected, quite blatantly and in a number of occasions, the objective of building a regional pharmaceutical capability with wider industrialisation aims for the continent²² (African Union, 2009). For, when it analysed the state of the African pharmaceutical industry, especially when it compared to its Asian counterpart, the problems that it identified were more industrial in nature than they were specifically about “medicines” per se²³. The problem was with the lack of domestic expertise across the engineering

²² Thus, the African Union notes: “Unreliable medicine supply systems continue to hamper access. Some of the perceived benefits of local production include: Local production will save foreign exchange, ii. Local production creates jobs, thus alleviating poverty and promoting social development, iii. Local production facilitates technology transfer, iv. Local production will stimulate exports, v. Raw materials produced locally will be readily available and cheaper, vi. Local production will improve/ enhance self-sufficiency in drug supply...The leadership of the African Union is committed to ensuring access to essential medicines for countries in need, irrespective of their level of technological development and manufacturing capacity.” (African Union, 2009, p.1)

²³ The African Union notes: “Pharmaceutical production is capital, technology and knowledge intensive/ driven. Technical expertise is absolutely critical, both in terms of sufficient numbers and appropriate skills. The continent will have to invest in the production of different skilled scientists (biology, chemistry, process engineering, medical engineers, biochemistry, bio-computer science, physics, medical engineers, clinicians, pharmaceutical scientists, technicians etc.). The critical factor is the ability of education system to produce sufficient numbers of skilled personnel in a sustainable manner. It will be necessary to form strong linkages with universities and funders to ensure a sustainable supply of required skills. Academicians often have more interest in basic research compared with clinical

sciences; the lack of advanced manufacturing capabilities; the lack of domestic capital and equipment; the lack of funding and support for African industries; the poor state and high cost of infrastructure, the massive amount of foreign reserves spend it on importing manufacturing ingredients; the fragmentation and lack of synergy between African markets; the lack of diversity in the types and classifications of pharmaceutical products that African manufacturers made, etc. (African Union, 2009). That last issue especially concerned them.

The AU was particularly worried about the fact that, although many African states had pharmaceutical industries, they concentrated and only had significant manufacturing capabilities in the secondary and tertiary end of pharmaceutical production, with none or very little at the primary level; tertiary production relates to the packaging and labelling of finished products or repackaging of bulk finished products; secondary production is about the manufacturing of finished dosage forms from raw materials and excipients; whereas primary production relates to the manufacture of active pharmaceutical ingredients and intermediates from basic chemical and biological substances (this aspect also accounts for 60 percent of the cost of manufacturing drugs and constituted the bulk of goods that Africa purchased abroad because it completely lacked a domestic capability). Along those lines, it noted that:

research, as the former is a faster route to promotions.³ The balance between the two must be properly promoted and nurtured. Africans in the diaspora can probably assist in this regard. Incentives may have to be identified. At this moment there are very few technical experts with the appropriate qualification and experience to enable the Continent to go into large scale primary manufacturing...Local production may not save foreign currency at entry. Active pharmaceutical ingredients account for 60% or more of the final cost of the product. Until primary manufacturing becomes a reality, there will not be meaningful savings of foreign currency. Production equipment, laboratory equipment and reagents etc. will be paid for in foreign currency...Manufacturing requires highly skilled scientists, engineers, technicians etc. Modern production is technology –driven and may not create many entry - level jobs...Local production may not save foreign currency at entry. Active pharmaceutical ingredients account for 60% or more of the final cost of the product. Until primary manufacturing becomes a reality, there will not be meaningful savings of foreign currency. Production equipment, laboratory equipment and reagents etc. will be paid for in foreign currency...Manufacturing requires highly skilled scientists, engineers, technicians etc. Modern production is technology –driven and may not create many entry - level jobs. There are however possibilities of job creation across the value chain if we begin at research through development, production and distribution. Jobs can be created in public research organisations, small and medium biotech companies, upstream in engineering and downstream in public health services.” (African Union, 2009, p.6)

Assessment of local production of medicines in some African countries (in the WHO African Region) indicated that out of 46 countries, 37 have pharmaceutical industries, 34 have secondary level production and 25 have tertiary production. Only one (South Africa) has limited primary production. Nine countries have no production capacity... (African Union, 2007, p.2)

The biggest objective of the Plan was therefore to address this fundamental and structural deficiency—more than this, it wanted Africa to become self-sufficient, to have capabilities in all three levels of production. By doing so, it saw the benefits as not only having the capability to manufacture generic HIV / AIDS drugs, but to, also, among other things; “save foreign exchange”; “create jobs, thus alleviating poverty and promoting social development”; “facilitate technology transfer”; “stimulate exports, raw materials produced locally and make them readily available and cheaper”; “improve / enhance self-sufficiency in drug supply” (African Union, 2009). In other words, as we saw see with respect to the Lagos Plan in chapter four, the building of original pharmaceutical manufacturing capability was viewed and represented along the lines of a regional industrialisation campaign, which was recognised as problematic within the context of the TRIPS agreement. The Doha reforms permitted the use of compulsory licences to respond to national health emergencies, it did not provide legal derogations or exemptions for the use of compulsory licences in industrialization, self-sufficiency campaigns; as explored in previous chapters, one of the primary motivations of the Euro-American, commercial association of consortium that drafted the TRIPS agreement was precisely to bring an end to self-sufficiency, import industrialisation plans that were quite common in many post-colonial states, including in many African Countries, in the 1960s and 1970s.

Nevertheless, after the publication of the Plan, an Expert Committee was established and in 2011, at the fourth Conference of African Ministers of Health, a “Business Plan” to bring about the Union Plan was drafted and published (African Union, 2012). Running at over 150 pages, and

covering everything from intellectual property rights, national pharmaceutical regulation and surveillance, licensing and distribution, quality assurance, funding and finance, forecasting and modelling, the Business Plan drew a detailed and ambitious blueprint for Africa to build an advanced, internationally competitive, domestic pharmaceutical industry. Since the publication of the Plan, however, not much has come out of it. In that, there has not been a huge structural transformation in the nature of Africa's pharmaceutical industry. This can best be seen by looking at how African, pharmaceutical manufacturers have struggled to meaningfully participate, and satisfy the regulatory burden, and compete with other industries in such places as Asia, within the multilateral regime that emerged in early 2000s to procure and regulate the flow, import, and certification of generic HIV / AIDS drugs in Africa.

Although the regime is highly complex, and is made up of a huge network of institutions and expert communities that overlay and intersect in very complicated ways, two programmes have been particularly important: The WHO's Prequalification Programme for Generic HIV / AIDS drugs (the "Prequalification Programme") and the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund). The Fund is the principal financing vehicle for the procurement of generic drugs imported into Africa, whereas the Prequalification Programme regulates and certifies the bulk of generic drugs procured by grants from the Fund. They are independent regimes, but, because of the nature of their work, and the global institutional power that they both have, their global operations have become intertwined, collaborative, and in many ways co-dependent and constitutive. The institutional history of each will now be provided.

THE INSTITUTIONAL EMERGENCE OF THE GLOBAL FUND AND THE PREQUALIFICATION PROGRAMME

This section traces the institutional emergence of the Global Fund and the Prequalification Programme, and particular focus is laid on their transnational and institutional significance.

The Global Fund, as suggested below by its origin in the US Congress, is an institutional and technical project of the United States' government, even if the initial proposal for its creation was of French origin. In October, 1998, at an AIDS conference in Abidjan, Ivory Coast, former French President, Jacques Chirac, publically proposed the formation of a multi-lateral or global AIDS Treatment Fund (Agence France Presse, 1998; Schwartländer et. al, 2006). He made this proposal in a speech that discussed, in more explicit form than was the custom at the time, the implied policy that European and American governments had towards the financing of HIV / AIDS treatment—or lack of treatment—of seropositive Africans for most of the late 1980s and 1990s. In the speech, he highlighted the difference in approach, and in so doing explored the difficulty that Western governments had in morally justifying their policy towards, the differential provision of treatment between Africans and Euro-American citizens ; no financial support was provided for African patients whereas massive state resources were directed at realising affordable or free access to treatment in Europe and America. Joining the campaign for global "Universal Access to Treatment", which was then being championed by the World Health Organisation and UNAIDS, Chirac publicly called for a multilateral fund to be established so as to finance the procurement of drugs for (Agence France Presse, 1998).

Besides floating the idea, however, the French state did not take any concrete action. It took a group of African-American legislators in the United States' Congress to translate the idea into policy and, eventually, into a funded and operational programme. In 1999, the Congressional Black Caucus (CBC) formed a Task Force on Global HIV/AIDS, chaired by Barbara Lee. She and congressman, James Leach, co-sponsored a bill for The AIDS Marshall Plan Trust Fund Act in the United States' House of Representatives in the same year after being part of a Presidential Delegation to South Africa that that was sent to investigate and report on the prevalence and effects of HIV / AIDS in the country. Upon their return, Congressional hearings on AIDS in Africa were organised (House of Representative, Committee on Banking and Financial Services

2000; Sternberg 1999; PR Newswire 1999a; PR Newswire 1999b). At these hearings, the epidemiological statistics of UNAIDS and the United States' Census Bureau (the origins of which were explored in the previous chapter) was deployed to highlight the increasing significance of Africa as an epidemiological site for HIV / AIDS and, thus, a pathologised geography of risk. So, in summarising the testimony of speakers at the hearing, the Chairman of the hearing noted, the disproportionate concentration of AIDS cases in Africa, its impact on vulnerable groups, such as children and orphans, and the potential of AIDS to significantly impact the sociocultural fabric and stability of African states:

Among all regions of the world, sub-Saharan Africa has been hardest hit by the disease. Although it has only 10 percent of the world's population, it accounts for 80 percent of global AIDS deaths and nearly 70 percent of the world's current HIV/AIDS cases... what dominates the African landscape is orphans. Acres of orphans—orphans raising orphans, because there is no one else left to do it. Tough children take to the streets. Weak children die of starvation. Many just sit, docile and sick, a vast, human ocean of orphans, mostly infected and doomed. (House of Representative, Committee on Banking and Financial Services, 2000, p.106)

After laying out the epidemiological problem, the hearing moved on to the financial issues, particularly the lack of adequate financial support by the United States towards HIV/ AIDS programmes in Africa. At the hearing, testimony from UNAIDS, the World Bank, and the Harvard School of Public Health noted that:

...resources to support HIV/ AIDS initiatives are not keeping pace... HIV/AIDS is spreading three times faster than funding available to control it... \$1 billion to \$2.3 billion is needed annually for prevention in Africa alone. That figure is far in excess of

approximately \$350 million that international donors are estimated to be providing for the region. (Ibid.)

To fill this gap, the Congressional hearing supported the draft legislation, The AIDS Marshall Plan Trust Fund Act, of the CBC. As suggested by the title, the Act aimed to establish a Trust Fund that would raise, disburse, administer—particularly in respect to selection of eligible grant recipients—global financing for HIV/AIDS programmes in Africa. Although this Act was eventually dropped, its proposal for a Fund found its way into what became the Global AIDS and Tuberculosis Relief Act of 2000 (the precursor to the United States President's Emergency Plan for AIDS Relief (PEPFAR)). In the 2000 Act, authority was granted to the American President to, *inter alia*, support the establishment of, and approve up to \$150 million of funding for, what was then called the “World Bank AIDS Trust Fund”; the idea was to create a Fund, a global financial or grant-giving vehicle, administered by the World Bank. The Bank would be governed by a Board of Trustees, composed by representatives from donor countries to the Fund (i.e., Euro-American states), which, in turn, would be supported by an Advisory Board, made up of various NGOs, patient and campaign groups, already collaborating with UNAIDS and its drug access initiatives. Two years later, the Global Fund to Fight AIDS, Tuberculosis and Malaria (The Global Fund) was formally established, not as part of the World Bank, but as a stand-alone entity; however, the Fund, or rather its finances, remained under the trusteeship of the Bank and a Board of Trustees and Advisory Committee as provided in the Act of 2000 and, subsequently, recognised in the United States Leadership Against HIV/AIDS, Tuberculosis, and Malaria Act of 2003; this Act also increased American funding for the Global Fund to one billion dollars and established the basic architecture of what became to be the United States President's Emergency Plan for AIDS Relief (PEPFAR).

After the Global Fund and the President's Plan was established, a small number of private, American, transnational foundations, with a substantial amount of financial capital, were also

created: mainly, the Clinton Health Access Initiative and the Bill and Melinda Gates Foundation. Between the Fund and these foundations, and a global network of NGOs and charities that work with them, funding for HIV / AIDS treatment programmes grew massively and rapidly, not just for Africa, but for the Global South generally; spending on HIV/AIDS programmes jumped from barely one billion dollars in the early 2000s to approximately fifteen billion by 2008 (Ravishankar, et al., 2009; Hecht, et al., 2010).

As suggested by considerable involvement of the American Congress in the establishment and design of the Fund, and the participation and contribution of major American foundations, and later European governments, the Global Fund was largely a Euro-American project: specifically, a technical and regulatory project of and for the “Donor Community”—that is to say, the 24 members of the OECD's Development Assistance Committee (i.e., The European Union, America, and the “observer” participants, such as the World Bank, the IMF, UNDP, and etc.) (Seckinelgin, 2008; Ravishankar, et al., 2009; Brown, 2010; Richard G.Parker, 2011; Quick & Moore, 2011; SalaamBlyther, 2011). UN-agencies, NGOs, charities, and African governments, despite their consultative and advisory roles in the Fund's administrative structure, were, institutionally governed and regulated by the Donor Community and their technical standards. Thus, for example, to receive grants from the Fund, UNAIDS's Drug Access Initiatives, or the treatment programmes of any African state, including their procurement activities for generic drugs, whether locally made in the continent or imported from elsewhere, had to satisfy the regulatory and technical standards of the Fund and its sponsors. In terms of quality assurance, licensing requirements, procurement solicitation procedures, that meant following the technical specifications of the World Health Organisation (WHO)'s Prequalification Programme for Medicines; specifications that were formulated by an expert committee at the organisation in the early 2000s.

THE EMERGENCE OF THE PRE-QUALIFICATION PROGRAMME: THE
SPECIAL SIGNIFICANCE OF PLACE AND DOCUMENTARY PRACTICE IN
PHARMACEUTICAL REGULATION

The Prequalification Programme grew out of UNAIDS' Access to Drugs Initiatives, specifically its decision to consider the offer by CIPLA, and Indian generic manufacturer, in the early 2000s to supply its Initiatives in Africa with generic drugs manufactured and licensed in India. The initial aim was to formulate a standardised quality assurance policy for all the co-sponsors of UNAIDS, and NGOs and other entities that collaborated with it in its drug procurement programmes. The policy was not meant to apply singularly to Indian manufacturers and suppliers, but to all drugs made and licence in the Global South. And as many African states started issuing compulsory licences to locally make or import generic drugs in the mid-2000s (e.g. Ghana, Cameroon, Zimbabwe) (World Health Organization, 2014)) and as a few African manufacturers started making generic HIV / AIDS drugs in the mid-2000s, the quality, safety, and therapeutic efficacy of these drugs (the general standard and quality of these drugs) became a subject of much discussion and concern at UNAIDS and among the Euro-American donors of the Fund. The limited surveys that the WHO conducted on African pharmaceutical manufacturers indicated that there was, potentially, significant problems with procuring from them; not just because of quality and safety issues, but also because of the apparent, lack of adequate regulatory supervision of their products by many African states (even if these surveys were not specifically on HIV / AIDS drugs, but on anti-malaria products). Commenting on these surveys, the African Union has noted:

...it is a matter of concern that, even when medicines are available, their quality is suspect due to the weak nature of regulation and widespread noncompliance with...critical components of the quality system...there is already a critical mass of evidence to suggest that the impact of sub-standard drugs is grave...39% of products tested in Ghana were

sub-standard and the proportion was as high as 64% of products tested in Nigeria. (African Union, 2012, p.16)

And, relatedly, throughout the early 2000s, reports of dangerous, counterfeit drugs harming and killing patients in Africa were common in the press²⁴ (Community Pharmacy, 2002; Associated Press International, 2003; IPS-Inter Press Service, 2003; Edwards, 2004; Xinhua General News Service, 2004; Agence France Presse, 2004). These reports were often about cases of hospitals, public bodies, and NGOs procuring life-saving drugs only to find that they were substandard and/or adulterated with chemicals that were inactive, not labelled, and, at times, dangerous and indeed lethal to patients that were administered these drugs. Besides therefore being viewed as a geography of epidemiological and pathological risks (centre of gravity of ground zero of HIV / AIDS), Africa, like many other regions of the global south, was considered and widely represented as a site of pharmacotherapeutic risks and dangers, and place for illicit production and circulations. As a typical example, an article in Business Week noted in 2001 that:

How bad is the problem worldwide?...some representatives of the world's biggest drug companies believe that \$19 billion worth of counterfeits are sold annually. Of that, the vast majority are produced and sold in developing countries... In some African and Latin American countries, as much as 60% of the drugs sold are counterfeit. (Business Week, 2001).

To respond to these reports, the WHO directed one of its permanent, technical advisory committees (its Expert Committee on Specifications for Pharmaceutical Preparations) to draw up technical standards and procedures to certify generic drugs manufactured and or licensed in the Global South; the Expert Committee was previously more known for its technical work on the periodic updating of the international pharmacopoeia, an international reference work for the

²⁴ And for recent commentary on this issue see chapter 5 of Cloatre's (2013) recent work on generics and Africa.

biochemical specifications, nomenclature, and classification of pharmaceutical chemicals and ingredients. In a space of about year and half, the Expert Committee drafted the United Nations' "Model Quality Assurance System (MQAS)" for pharmaceutical products, the precursor of the WHO' Prequalification Programme. As a technical project, the MQAS was a joint exercise and collaboration between, *inter alia*, UNAIDS and a network of Euro-American states (via the OECD's Development Assistance Committee) and international, commercial and professional associations such as the International Pharmaceutical Federation (FIP) (the association, as we have seen in chapter four, that did so much to draft the TRIPS agreement). The mandate of the Committee and FIP was to: "...design...a uniform and harmonized system...to ensure procurement of pharmaceutical products of defined quality for supply to patients, based on a mutually recognized process of prequalification of products and manufacturers by means of product dossier evaluation and inspection of manufacturing sites" [in other words, a procurement/tendering prequalification system] (World Health Organization, 2006, p.6).

This "uniform and harmonized system" centered on the specifications of an "Eligibility Criteria" to prequalify manufacturers and products. As a regulatory regime, it relied principally on technical, documentary practice and geo-legal techniques: i.e., the inspection and certification of manufacturing facilities and the submission of a technical, regulatory "Product Dossier" for evaluation by the Committee. Only manufacturers and products "pre-qualified" and approved by the Expert Committee would be permitted to participate in any Global Fund, or any other UN-funded, or Donor-funded, pharmaceutical solicitation process (commonly referred to in procurement documents as "Invitations for Expression of Interest") (World Health Organization, 2006). And, it was this Prequalification and Assurance System that, in the mid-2000s, was re-designated as the WHO's Prequalification of Medicines Programme (Prequalification Programme).

And, in terms of how the Prequalification Programme was formally linked to activities of the Global Fund specifically: since the Fund operated under an Administrative Services Agreement

(ASA) with the WHO, the Fund adopted and incorporated the Prequalification Programme into its growing operations across countries of the Global South, generally, and Africa particularly. The Global Fund made prequalification through the Programme a central requirement for its own quality assurance policy and, most importantly, its Grant Agreement with Principal Recipients (GAPRs)—the standard form contract the Fund signed with recipients of its grants (Global Fund, 2009).

The result of this agreement and collaboration was substantial. The institutional and regulatory regime (or "Geography of Power") that it instituted over countries of, and generic manufacturers from, the Global South was considerable. The Global Fund, by the mid-2000s, increasingly financed most HIV/AIDS-related programmes and drug-procurement schemes in Africa and elsewhere, the Fund's quality assurance policy gained considerable importance and influence in respect to the transnational governance of generic HIV/AIDS drugs. The Global Fund's quality assurance policy, in effect, became the quality assurance policy for not only UN-agencies operating in Africa, but the massive and growing network of pharmaceutical manufacturers and suppliers, importers, NGOs, foundations, charities, and African-governments that participated directly or indirectly in the Global Fund's HIV/AIDS programmes in Africa (Wilson, et al., 2012). The Global Fund's quality assurance policy, extended the territorial reach and regulatory scope of the WHO's Prequalification of Medicines Programme and, by extension, the Euro-American states and commercial and epistemic networks that informed its technical standards.

**PART TWO: THE TRANSNATIONAL GOVERNANCE OF GENERIC HIV/AIDS
DRUGS THROUGH THE PREQUALIFICATION PROGRAMME,
DOCUMENTARY PRACTICES, AND CERTIFIED FACILITIES AND
LABORATORIES**

For the rest of this chapter, the focus shifts to the specific regulatory techniques (i.e. the construction and submission of the Product Dossier to the Expert Committee and the inspection and certification of GMP, GLP, GCP sites) that the Prequalification Programme and the Fund have deployed to govern the circulation and movement of generic drugs to Africa through their sponsored schemes. And, on a wider theoretical level, it begins by describing and examining the current sociolegal scholarship on technical, documentary practices and the deployment of space—or, more specifically, certified laboratories and manufacturing facilities—as a technique and regime of governance. It argues that “the where” of techno-scientific production, the spaces where documents and material artefacts are produced, has central significance as to whether they, and the knowledge claims they embed, are accepted as legitimate or, importantly, permitted to circulate globally. It finishes by using the Prequalification Programme as a case-study to elaborate on this argument; specifically, the Programme’s use of Good Manufacturing Practice (GMPs) facilities, Good Laboratory Practices (GLPs) laboratories, and Good Clinical Practice (GCP) centres as a means to govern which generic HIV/AIDS drugs prequalify for the procurement schemes of UN-agencies, the Global Fund, and major, Euro-American NGOs and foundations.

DOCUMENTARY PRACTICE AND GEO-REGULATORY TECHNIQUES IN SOCIOLEGAL SCHOLARSHIP

This section examines how sociolegal scholarship has investigated documentary practice and the deployment of space as a regulatory technique. It may seem trite to say, but, documentary practice is pervasive in much social, economic, legal, and political life. Documents are not just “artefacts of modern knowledge”, but artefacts of modern life. They constitute a unique form of life. Yet, and withstanding their pervasive presence, the significance of documents, the appreciation of “documents” and documenting as a distinct field of social-cultural life and object of academic inquiry, in its own right, has not, until recently, received adequate attention in much socio-legal scholarship (Riles, 2006).

Rather, and consistent with the “language turn” in philosophy and sociology in mid-20th century, the interest has been in examining documents for their “textuality”: that is, for their interest as subjects of critical and political hermeneutical deconstruction. The text has mattered as object of literary criticism and political deconstructions of modern knowledge. The aim has been to show how, behind the text, lays a will to power, an ongoing contestation over the construction of knowledge and its relationship to, and entanglement with, political power—especially, as it relates to gender, race, sexuality. So, the text—as we have seen in the previous chapter with respect to provisions of the TRIPS-agreement—is not just text, but, a political battle field and artefact to be deconstructed and unpacked with a critical gaze and analytic sensitivity towards hidden violence, aggressive “silences”, normative positioning. In short, the document matters as text and site of sociocultural and political deconstruction (Wachterhauser, 1986; Still, 1993; Hall, et al., 1996; Feuerwerker, 1998; Risser, 1997; Dostal, 2002; Collins & Blot, 2003; Baird, 2004; Galewicz, 2006).

The attention on textuality has meant that other important aspects of documents—or, more precisely, documentary practice—have taken secondary place, for a while. Less highlighted has been, *inter alia*: firstly, the rituals, work, activity, and routines conducted through, and generated and mediated by, documents (their emergence and unbecoming): the materiality of documents as actual things in the world, physical stuff that is made and constructed, moved and destroyed, and as socio-archaeological artefacts that can be excavated and examined. In other words, besides their textuality, the actual work and practice of documenting has, for a while, been represented as “uninteresting” and “boring” or, simply, as “background noise” (Verstraete, et al., 2002; Riles, 2006).

DOCUMENTS AS ACTANTS: THE SOCIOCULTURAL AND INSTITUTIONAL LIFE OF DOCUMENTS

In recent years, however, there has been some growing interest in documents other than for their textuality. Many academic disciplines have increasingly turned their gaze towards the

“doings” and “work” with documents (Harper, 1998; Riles, 2006; Riles, 2011). This shift has occurred largely through methodological and conceptual changes in sociocultural scholarship, among which has included: the “recruitment of Wittgenstein” (Pels, 2003; Collin, 2010) and the general “practice turn” in sociology (Schatzki, et al., 2001): the re-engagement with “non-human actants” and “materiality” and “hybridity” in cultural-geography (Bartley, et al., 2005) and Science and Technology Studies (Pickering, 1995; Lenoir, 1998; Vannini, 2009; Latour, 1991); and the deployment of analytic and ethnomethodological techniques from institutional sociology and bureaucratic anthropology to study legal and regulatory work (Ybema, et al., 2009; Hull, 2012).

This scholarship has showed how, among other things, documentary practice intersects and operates through diverse fields and sites of institutional, bureaucratic, legal, technical, and material work (Harper, 1998; Lenoir, 1998; Hull, 2012). Far from being dull “background noise”, the doings with documents and the work of technocrats and “document people”—whether at law offices, border posts, prisons and petrol boards, hospitals, trading floors, multinational organisations, technical advisory committees, UN-forums, and etc.—has been shown to be highly political, fluid, contested, epistemically challenging, and of significant sociocultural import (Latour & Woolgar, 1986; Harper, 1998; Riles, 2006; Riles, 2011; Hull, 2012). Documenting is now an important aspect of science, engineering, regulation, law, bureaucracy, and, indeed, politics.

DOCUMENTARY, REGULATORY TECHNIQUES: GOVERNING BY DOCUMENTING

Socio-legal anthropology, particularly the work of Annelise Riles, has presented documentary practice as an all-enveloping part and referent of technical and regulatory work (Riles, 2011). Instead of (solely) focusing on questions of textuality (important as it is), socio-legal anthropology has shed light on the routinized practices, rituals, and work of documenting around technical-regulatory knowledge-making; instead of viewing documents as text to be (merely) “read”, documents have been shown as active, sociocultural actants to be confronted, “worked”,

engaged, and/or negotiated with (Torpey, 2000; Caplan & Torpey, 2001). Riles, along with many other bureaucratic ethnographers (Chalfin, 2010), have shed light on the increasing ubiquity and disciplinary capacity of documents (especially, practices of “form-filling”) in technical and bureaucratic life (Harper, 1998; Caplan & Torpey, 2001; Riles, 2011).

Documentary practice has been implicated in the growth, or discourse around, the “audit” and/or “risk” society, not just in Euro-American states, but globally; a society or culture were concerns around, and politics about, the identification, construction, problematisation, and management of risks (understood broadly to include social, financial, criminal, or legal “uncertainty”) in all forms of life has become common (Maril, 2000; Beck, 2004). Scholarship in this areas has described and examined how the principles and aims of accountability, transparency, and “risk-management” in regulatory practice are translated through, embedded in, and mediated by, different, literally forms, and artefacts of routinized practices of documentation. To audit and manage risk is, apparently, to do things with documents and forms: that is, to find, generate, sign, certify, tick, send, present, contest forms (Maril, 2000; Travers, 2007; Riles, 2006; Reed, 2006; Riles, 2011). Not surprisingly, a “documentation industry” and professional community, both nationally and international, has grown around “paper people” and form filling. So much so, that it has become hard to think of modernity and basic practices of governing and regulating, outside of the form and its work.

So, for example, and as we shall see in this chapter, quality assurance, auditing, certification, and verification (by the generation of forms and the filling-in of forms) is currently, in many ways, an essential, if not inseparable and indispensable, feature of pharmaceutical production, governance and regulation. Accordingly, the technical experts that have been granted authority to document and audit increasingly mediate the boundaries between the legitimate and illegitimate, the meaning of private and public, the circulation of national and global knowledge and artefacts, such as generic drugs.

THE CONNECTION BETWEEN DOCUMENTATING AND GEOGRAPHY

However, the spatial dimensions of documentary governance and production, especially where it touches on techno and regulatory practice, have not adequately been examined. This is surprising given the extent to which the governance of space, the regulation of what takes place in sites designated as having sociocultural and regulatory import, has been central in the intensification and proliferation of auditing and risk-management practices; that is, making sure schools, universities, firms, court rooms, government agencies, banks, laboratories, and etc. fill in forms and document their auditing and validation practices, is an important part of risk management.

This lack of interest is also interesting given how much space scholarship on Science and Technology Studies and Laboratory Studies has given to the relationship or tension between geography and knowledge: what, as examined in Chapter One, Gieryn has phrased the “Epistemics of Place” and “the paradox of place and truth”²⁵ (Gieryn, 2006, p.113). These two things (the directed and spatial ecology of documentary, regulatory practice, on the one hand, and the question of space and epistemology, on the other) must be brought together—at least when dealing with regulatory science. The where of documentary and material production, the place (i.e. “Truth-Spots”) of where documents and artefacts are constructed has been shown to matter as much as the “what”—the content or form of things. Besides the practices that “stuff” and scientists perform, the question of where scientists do these things (the “microgeography of knowledge-production” (Livingstone, 2004)) have important epistemic and, and we shall see, regulatory and legal significance.

²⁵ Which Gieryn explains in the following terms: “All scientific knowledge-claims have a provenance: they originate at some place, and come from there. However, as they become truth, these claims shed the contingent circumstances of their making, and so become transcendent (presumably true everywhere, supposedly from nowhere in particular). Turning the argument around: scientific claims are diminished in their credibility as they are situated somewhere, as if their truthfulness depended upon conditions located only there.” (Gieryn, 2006, p.113)

TRUTH-SPOTS, LAW, AND REGULATORY SCIENCE

As suggested in chapter one, besides “stuff”, space or geography has also been shown to be an important actant in STS scholarship. Besides the practices that “stuff” and scientists perform, the question of where scientists do these things, “the microgeography of knowledge-production”(Livingstone, 2004), has, also, been shown to matter a great deal. Space/geography have been shown to matter in terms of informing how scientists go about their epistemic work; colouring how knowledge and techno-scientific artefacts are received, legitimated, materialised, and generally, made-sense of or “read”, as Livingstone phrases it.

It is within this context that Gieryn speaks of the “Epistemics of Place” and “the paradox of place and truth” (Gieryn, 2006). By way of short summary from chapter One: The “Epistemics of Place” relates to the question of how knowledge constituted in certain places is translated and constituted for trans-subjective legitimisation and acceptance. How the question of place is negotiated and bracketed in techno-science. How knowledge or artefacts that embody knowledge are made or represented to be “placeless” and universally legitimate. In STS, two techniques, among many, have been suggested: mainly, the construction of “Truth-Spots” and the deployment of “Thing-Knowledge”. However, for the purposes of this chapter, only Truth-Spots need be commented on or revisited.

Like other ANT scholars before him (most especially Latour), Gieryn argues that one way that the “Epistemics of Place” is negotiated is through the construction of standardised epistemic spaces/places that act to certify and validate knowledge. The typical example given by Gieryn is laboratories. Laboratories provide a “presumption of equivalence” in respect to the material environment within which knowledge is constructed and manipulated. A great deal of effort and time is expended in standardizing the architecture and artefacts of laboratories, routinizing the techniques used, regulating and policing who and what can enter. All of this is done so that laboratories, or spaces constituted into laboratory-like settings, can function as a quasi-warranty of

epistemic authenticity, legitimacy, reliability, and validation. The point of Truth-Spots is to suspend questions of space and focus discussion on the knowledge generated and “black-boxed”. It permits scientist to act “as if” space does not matter and as if knowledge is placeless.

However, there are truths spots and “Truth Spots” and law plays an important role in separating the two. Although the emergence or designation of Truth Spots is, generally, a sociocultural process, certain specific processes, such as law and regulatory practices, constitute them; in this case, by way of geo-regulatory technique. These techniques construct geo-legal spaces that, when constituted, can co-constitute and inform the practice of law that govern and inform them. If we recall from Chapter One, it was noted that Geography-In-Law (or geo-legal techniques) touch on the power of law to build spaces to govern whereas Law-in-Geography (or the way space co-constitutes law) negotiates the friction and pull of cultural and political geography (the power of the where to affect the what and doing of law). Said differently and more precisely: law and regulatory practice can constitute geo-legal Truth-Spots (e.g., accounting and law firms, certified laboratories, centres, facilities, etc.) that, in turn, can co-constitute and inform what form regulatory practice takes. These geo-regulatory spaces, or Truth-Spots, can, as will demonstrated below, perform important documentary practices, and produces artefacts, of considerable regulatory and legal import. That is, Truth-Spots can become a geo-regulatory technique: a way to govern and order by way of using space. A case-in point is the Prequalification Programme.

THE PRE-QUALIFICATION PROGRAMME AS GEO-REGULATORY TECHNIQUE

The point is as follows: the sites and places (the “truth-spots” (Gieryn, 2002) and “centres of calculation” (Latour & Woolgar, 1986)) of documenting have, accordingly, wider epistemic, legal, ontological, and regulatory significance than common acknowledged. That is say, it is not only that documenting has become generally important; it is rather that the cultural-geography of

where documents are generated, given-birth, certified, audited, verified, filled-in, and distributed has also become (legally and epistemically) important.

Place has become an essential institutional dimension and “legal technique” ((Hancké, 2009; Riles, 2011). This has been true for many fields of commercial practice (noticeably in finance and “public management” (Maril, 2000; Harper, 2000)) for some time, but, since the 1960s regulatory-science, broadly, and pharmaceutical regulation, specifically, has increasingly relied upon deployment of certified places as “Truth-Spot” and, indeed, techniques of governing. Certified sites (i.e., certified Good Laboratory Practices (GLP) laboratories, Good Manufacturing Practices (GMPs) facilities, and Good Clinical Practice (GCPs) centres) in pharmaceutical regulation have been bestowed with considerable epistemic authority as legitimating places of and for regulatory technicality, materiality, and epistemology. Only material artefacts (pharmaceutical products) and technical documents (Common Technical Document) produced from those places have been made capable of global circulation and travel; i.e., translated from local “mere objects” into legitimate subjects of trans-national acceptance.

And, for the rest of this chapter, the aim is to show how, through the WHO’s Prequalification Programme, GMP facilities, GLP laboratories, GCP centres around the world, have been deployed to establish geo-regulatory typology and epistemic boundary between “legitimate” Euro-American artefacts and knowledge (safe and reliable generic drugs and technical documents), on the one hand, and “illegitimate”, “risky”, “low quality”, “local” African and post-colonial objects, on the other. Accordingly, the technical documents, data, and material objects generated and constructed in these certified sites, have acted as “Truth-Spots” and “Obligatory Passage Points” that constitute a techno-scientific/regulatory governance regime; a geo-regulatory technique by which the production and circulation of generic, HIV/AIDS drugs are managed.

And, more specifically, by analysing the WHO’s Prequalification Programme for generic HIV/AIDS drugs, the aim is to explore the role that place (specifically the technical documents

and artefacts produced in certified regulatory laboratories, centres, and manufacturing sites) has played in regulating the circulation of generic HIV/AIDS drugs produced and imported into Sub-Saharan Africa.

SUMMARY

As much has been said, a quick summary is in order: Although documents, for some time, were typically examined for their textuality, in recent years, the practices, doings, rituals, and work around documentation have increasingly been recognised for their socio-cultural, legal, political, and regulatory significance. The practices of documentation have been studied in their own right, as distinct field of sociocultural and legal practice. Yet, scholarship in this area has not adequately addressed its spatial and geo-political dimensions.

“The where” of documentary practice has considerable, epistemic and regulatory significance, especially when situated in the world and regulatory science. Truth-Spots, geo-legal spaces designated as having regulatory significance, are trusted to produce epistemic and material artefacts (e.g., technical documents and pharmaceutical drugs) that can be trusted and permitted to circulate widely. In the context of the Prequalification Programme, certified GMP facilities, GLP laboratories, and GCP centres are deployed a geo-regulatory technique: a regime to govern the transnational production, circulation, and procurement of generic HIV/AIDS drugs from Africa and between post-colonial geographies, generally.

PART THREE: THE TRANSNATIONAL GOVERNANCE OF GENERIC DRUGS THROUGH THE PREQUALIFICATION PROGRAMME: THE IMPORTANCE OF DOCUMENTATION AND CERTIFIED LABORATORIES AND FACILITIES

The section begins by exploring the institutional emergence and significance of the product dossier and Common Technical Document (CTD) for regulatory purposes within the

Prequalification Programme. It then examines how certified places are used as regulatory Truth-Spots to prequalify and legitimise generic drugs for global circulation and movement.

Although, the Prequalification Programme is/was (narrowly speaking) a procurement solicitation procedure, the Expert Committee on Specifications, nevertheless, modelled its “Eligibility Criteria” on the technical, documentary, material, and regulatory practices of Euro-American Drug Regulatory Authorities (DRAs); as we shall see below, it operated as a *de facto* regulatory agency for drugs manufactured in post-colonial states. More specifically, the Expert Committee borrowed a great deal from the licensing and registration procedures, the technical documentary practices and geo-regulatory techniques, of the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH or, henceforth, the “International Conference on Harmonization”).

The International Conference on Harmonization is one among a growing number of transnational “standard-setting” bodies that increasingly regulate global trade through the formulation of technical standards and “guidelines” related to techno-scientific artefacts. As with many other standard-setting bodies, the Conference does not operate according to a clear distinction or bifurcation between private and public. As the reference to “Conference” indicates in its acronym, it is a collaborative technical project and complex partnership between (broadly) Euro-American Drug Regulatory Authorities and a network of commercial and epistemic communities from the transnational, pharmaceutical industry. Through a series of permanent and ad hoc Expert Working Groups (EWG) and Steering Committees (SC), Euro-American agencies and pharmaceutical associations draft, co-author, publish, and revise a voluminous and highly technical body of pharmaceutical-engineering and manufacturing standards, specifications, and administrative forms and procedures related to pharmaceutical licensing and marketing. These standards are subsequently transplanted into domestic law through legislative acts, but, their structural influence extends beyond Euro-American states: because of geo-economic dominance of Euro-American

states in the pharmaceutical, manufacturing sector, its standards and specifications are widely referred to and relied upon by non-ICH members and other transnational institutions, such as the WHO's Expert Committee on Specifications (Tobin & Walsh, 2008; Wood & Foote, 2009; Boe, 2009; Griffin, 2009).

The relationship between the WHO, broadly, and the Expert Committee on Specifications, specifically, and the International Conference on Harmonization is extremely close and multifaceted. Although institutionally separate, the Conference and the WHO are tightly connected by through the nature, scope, and entanglement of their technical work and practice: they form part of a complex "community of practice" operating through many institutional intersections and the exchange and circulation of technical documents.

So, for example, the WHO is an "observer" at the International Conference on Harmonization's Steering Committee and the WHO is increasingly seeking to take a greater active role its activities: members of the Conference often make reference to and participate in the drafting of the WHO's technical classifications and nomenclature (especially the WHO's International Pharmacopoeia and Drug Dictionary); and, many, if not all, of the pharmaceutical associations that participate in the Conference's Expert Working Groups (EWG) also draft, advise, and inform a great many of the technical reports and standards that the WHO's Advisory panels and Expert Committees draft (of which they are many, covering a wide range of subject matter (World Health Organization, 2010)). The technical, documentary practice of the WHO's Expert Committee on Specifications as it relates to the Prequalification Programme is no different.

To govern the massive inflow and influx of generic, HIV/AIDS drugs going to Africa, among other post-colonial states, the Expert Committee worked with the International Conference on Harmonization and made use of its technical, documentary forms for its Eligibility Criteria for the Prequalification Programme; particularly, as we shall bellow, in respect to the form and content of the Conference's Common Technical Document (CTD).

THE DIFFERENT MODES OF REGULATION THROUGH STRINGENT
REGULATORY AUTHORITIES AND OTHER REGULATORS FROM THE GLOBAL
SOUTH

The WHO's Expert Committee of Specifications, to extent its work relates to the Prequalification Programme, defers considerably to the drug-approval decisions and registrations of members of the International Conference on Harmonization; as would be expected given that the WHO is an observer at the Conference. Euro-American, regulatory authorities, because their participation in the Conference, are given "special status" within the WHO's Prequalification Programme; for purposes of the Programme, regulatory authorities of the Conference on Harmonization are designated "Stringent Regulatory Authorities" (SRAs), meaning that pharmaceutical manufacturers and products (generic or otherwise) approved and registered by Conference members automatically prequalify for UN-agency and Global Fund solicitation requests. However, those products (mostly, generics) and manufacturers that are not approved or registered by SRAs are the only ones required to seek prequalification by the Expert Committee on Specifications.

The Expert Committee's community therefore governs the Prequalification Programme through a geo-regulatory typology of difference, risk, and governance. Artefacts originating from Euro-American states are granted special rights and privileges of circulation where those from post-colonial states, are governed and disciplined by the technical, documentary, and geo-regulatory practices of the Expert Committee; that is, the requirement to submit "Product Dossier" submitted according the specifications and documentary aesthetics of the Conference's Common Technical Document (or "Common Document").

THE SIGNIFICANCE OF THE COMMON TECHNICAL DOCUMENT IN
GOVERNING GENERIC DRUGS

To appreciate the significance of the Common Technical Document, we must first understand what the Expert Committee's means by a "generic". Drawing on technical guidelines from the International Conference on Harmonization, the Expert Committee defines a generic through two main, technical practices, one documentary and the other spatial. A generic is a material artefact that is constructed, analysed, documented, and demonstrated to be therapeutically effective in certified places (i.e., Certified Good-Manufacturing Practices (GMPs) facilities, Good Laboratory Practices (GLP) laboratories, and Good Clinical Practices centres). A generic is thus a hybrid artefact: a material artefact that embeds techno-scientific knowledge through a process of material and documentary practice (Vannini, 2009).

Or, as the Expert Committee puts it, a generic is that which is presented and "intended to be chemically and therapeutically interchangeable" with an already licensed pharmaceutical artefact (the comparator). For a given chemical artefact or sample batch to pre-qualify as a generic HIV/AIDS drug, the Committee requires manufacturers to technically demonstrate that their sample batch or "representative sample" is bioequivalent—that is, "pharmaceutically" and "therapeutically" equivalent by virtue of bioequivalence clinical/pharmacological studies—to a comparator drug; in most, if not all cases, a comparator is a drug already registered and approved by a Stringent regulatory authority or Euro-American state.

To demonstrate pharmaceutical and therapeutic equivalence, the manufacturer (or "applicant") must submit a Product Dossier with a set of detailed technical data and documentation related to the quality, safety, and efficacy of the sample batch. This generally requires, among other things: technical data on the purity of all ingredients used in manufacture; data on the finished pharmaceutical product (such as information about stability); results of bioequivalence tests (clinical trials conducted in healthy volunteers), etc. (World Health Organisation, 2010). However, the presentation of the data must follow a specified technical aesthetic (as set out the ICH's Common Technical Document).

However, as noted above, the production of the batch sample and the filling-in of the Dossier is highly regulated. Only samples produced, analysed, and demonstrated to be therapeutically effective and chemically equivalent by certified facilities can be submitted to the Expert Committee.

SUMMARY:

The Prequalification Programme operated through technical, documentary practice and geo-regulatory techniques borrowed from Euro-American states—or, more precisely, the “Stringent” regulatory authorities, and members of, the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH).

To govern the flow and circulation of generic HIV/AIDS drugs from post-colonial states, the Expert Committee constructed a geo-regulatory typology—a “Geography of Power”, as it were—based upon a problematisation and discourse of risk. Those products licensed by Stringent regulatory authorities (that is, those originating from Euro-American states) automatically pre-qualify for consideration during the solicitation procedures of UN-agencies, the Global Fund, and NGOs that receive grants from them. However, for non-Stringent products, for generics coming from post-colonial states, they are subjected to different and special regime of governance: they must submit Product Dossier derived from a batch or representative sample of drugs manufactured, analysed, and clinically demonstrated to be therapeutically effective and bio-equivalent in certified facilities, laboratories, and clinical centres. Data about whether this artefact is bio-equivalent to a comparator, Euro-American drug, must be provided according to the specifications and technical aesthetics of the Common Technical Document—a document co-authored by the International Conference on Harmonization, but also deployed by the Expert Committee in its Prequalification Programme.

GEO-REGULATORY TECHNIQUES AND “TRUTH-SPOTS”: THE PRODUCT DOSSIER AND CERTIFIED LABORATORIES AND FACILITIES

In this final section, the certification procedure for manufacturing and laboratory sites related to the production and prequalification of generic HIV / AIDS drugs is examined. The particular significance of certified sites as Truth-Spots is explored and the impact that these certification procedures have had on the capacity of African manufacturers to meaningfully participate within and prequalify for the Global Fund and WHO's procurement programmes is investigated.

GOOD MANUFACTURING PRACTICES, GOOD LABORATORY PRACTICES, AND GOOD CLINICAL PRACTICES REGULATIONS

The generic-drug approval process of generic HIV/AIDS drugs in the WHO Prequalification Process is based on interconnected practices that occur in certified GMP (Good Manufacturing Practices), GLP (Good Laboratory Practices), and GCP (Good Clinical Practices) sites. This process can be divided into two.

Firstly, practices to establish pharmaceutical equivalence: Certified GMP facilities are where representative samples to be sent for Expert Committee-approval must be manufactured (and this responsibility is largely dealt with my pharmaceutical and chemical engineers); certified GLP laboratories/sites are where representative samples made in GMP facilities are chemically characterised, analysed, and tested for purity, potency, and quality (and this is mostly the work of analytical chemists). Secondly, practices to establish therapeutic equivalence: Certified GCP sites are where samples (made in GMP-facilities and analysed in GLP-laboratories) are tested in humans for therapeutic efficacy (or bioequivalence/ bioavailability studies).

Thus, for a generic drug to be accepted as scientifically “comparable” to an already licensed/comparator drug, it must pass through all three certified sites (it must demonstrate pharmaceutical and therapeutic equivalence). As the batch sample, or mere object, travels through

GMP facilities, GCP laboratories, and GCP sites, scientific-regulatory knowledge is generated (and compiled for submission in a Dossier Form) to be assessed and evaluated by the Expert Committee on Specifications.

THE COMMON TECHNICAL DOCUMENT AND GMP, GLP, AND GLP PLACES

Because of their significance as Truth-Spots, a great deal of time and effort is expended towards standardising, routinising, regulating, auditing, policing the material and documentary practices that takes place in GMP, GLP, and GLP sites. In very many ways, these sites have been deployed to deal with the problem and friction of place, the paradox of truth and space, and the “Epistemic of Place” by constructing a “presumption of equivalence”: that is, regulating and policing these sites so much as to bracket the lack of trust and anxiety of risk at the Euro-American states, the Global Fund, and the Prequalification Programme itself, has and has had in relating to generic drugs produced from post-colonial geographies. Certified sites allow UN-agencies, NGOs, the Global Fund, etc. to act “as if” place does not matter and if knowledge is placeless. It allows the Expert Committee to trust the knowledge claims and data submitted in the Product Dossier. The sites act as a geo-regulatory technique and, importantly, as a quasi-warranty of epistemic authenticity, legitimacy, reliability, and validation.

CONSTRUCTING A “PRESUMPTION OF EQUIVALENCE”: CERTIFIED SPACES, QUALITY ASSURANCE, AND AUDITING PRACTICE

The “presumption of equivalence” and designation as “Truth-Spots” is not, however, an organic state; a great deal of detailed regulation, down to a minutia, goes into specifying and policing what goes in and out, what takes place, within those sites. For lack of time and space, the particularities of Good Manufacturing, Laboratories, and Clinical Practice regulations cannot be described or examined in meaningful way; the GMPs, GLP, and GLP regulations are highly and

extremely technical, composed of multiple volumes, touching upon a wide array of subject matter, elaborated through thousands of pages. However, by way of suggestion, practices subject to these regulations, especially as they touch on documentary practice, which covers much of their content, will be briefly described.

GOOD LABORATORY PRACTICE, DOCUMENTARY PRACTICE, AND THE ANALYTIC CHEMISTRY OF GENERIC DRUGS

For example, to conduct studies to establish pharmaceutical equivalence (Module 2 and 3 of the Common Technical Document within Product Dossier), an applicant for pre-qualification status must demonstrate to the Expert Committee that its sample drug, is, *inter alia*: intended to be administered by the same route, and that it has the same active pharmaceutical ingredient(s) in the same dosage form as a comparator drug already licensed by Stringent regulatory authorities. To establish this chemically, the applicant needs to employ a team of analytic chemists and pharmaceutical engineers, often through the sub-contracting or outsourcing of this work to commercial Research Contract Organisations (CROs), with GLP-certification and the technical and documentary expertise to address the many chemistry, manufacturing, and control (CMC) requirements needed to fill-in the Product Dossier Form.

In addition, and adding to the complexity and technicality, the analytic chemists working in these Research Contract Organisations must conduct their chemical tests (in respect to active ingredients and the strength, quality, purity, and potency of the applicant generic) only through Regulatory Analytical Procedures (RAP or Regulatory Procedures). The Procedures used must be certified by the Association of Official Analytical Chemists (AOAC), which publishes approved procedures through a book—the AOAC's International Book of Methods—of immense, transnational, regulatory significance (Niazi, 2007).

Through Regulatory Procedures and other reference standards, the applicant—or rather, the certified laboratory conducting chemical tests on a sample batch of drugs manufactured Good Manufacturing Practices-certified facilities—must address, in some detail, such methodological issues as: the selection of samples (the number of samples—e.g., vials, tablets, etc.) and how they were used: equipment and equipment parameters—that is, the listing of all equipment, such as instrument type, detector, column type, dimensions, as well as a list of equipment parameters (e.g., flow rate, temperatures, run time, wavelength settings): the list of reagents and their grades used; the procedures for the preparation of all standard solutions (e.g., stock, working standard solutions, internal standards); description of sample preparations for individual tests; a step-by-step description of the procedure of analysis; methods of calculations and their transformations, and etc. (U.S. Department of Health and Human Services, 2000).

And whereas Regulatory Procedures aim to insure data precision or validity, GLP-regulations themselves deal much with “quality assurance” and, as such, they are particularly detailed and complicated—so much that the WHO publishes a Handbook to help users manage its complexity and cost.

As with all quality assurance systems, the GLP regulations address basic issues around personnel, equipment, documentation, and laboratory facilities (Seiler, 2005; Weinberg, 2007; Tobin & Walsh, 2008). GLP-facilities are a space where every feature of the “the audit society” seems to manifest itself in vivid form. That is, much of the GLP is about auditing and validation through documentation. Given the considerable importance of “Thing Knowledge” (Baird, 2004) in GLP-facilities, that is, the massive amount of inscriptions and data generated by laboratory machines and software, the validation of laboratory equipment and tools are a subject of much regulation.

Thus, all laboratory equipment—particularly scales, balances, computers (hardware and software), and analysing/measuring apparatus—deployed to prepare, generate, measure, and

assess data and batch/samples must undergo periodic validation, inspection, and maintenance process of all kind (Patnaik, 2004); these processes must be documented and archived in a laboratory logbook for later inspection.

As suggested, GLP regulations place considerable emphasis on practices of documentation and archiving: so, for example, all tests to establish the identity, strength, and purity of the drug-sample/batch must be documented (usually in a laboratory notebook) and the raw data for such tests must be retained. Thus, within GLP-certified sites, documentary inscriptions and traces are everywhere and generated seemingly-incessantly. The list of regulatory documents includes, but is by far not limited to: letters, notes, memoranda, logbooks, instrument printouts, standard operating procedures (SOPs), research protocols and manuals, worksheets, electronic signatures, electronic records, photographs, and etc. (Ferrero, 2007).

The volume of documentation is of such scale that that GLP regulation requires the establishment of a quality assurance unit (QAU) with the special responsibility and duty to maintain a documentary archive of laboratory work. The duties of these Units may include, such things as: the maintenance of the master schedule sheet (listing of all GLP projects in the facility): the review of critical documents such as procedures, protocols, and reports (ensuring GLP compliance): Regular inspections of test facility to assess compliance status: the maintenance of study protocols: the establishment of procedures pertaining to QAU functions: the provision of documentation and reports to the drug regulatory authorities that internal inspections have occurred; and etc. (Ferrero, 2007)

GOOD MANUFACTURING PRACTICES AND DOCUMENTARY REQUIREMENTS

As with Good Laboratory Practices, documentary requirements are pervasive in Good Manufacturing Practice and Good Clinical Practice regulations and facilities. In respect to the

former, GMP regulations touch on a wide range of subject-matters, including regulations and specifications in respect to the safety, sanitary practices, accreditation, and general training requirements of personnel; the specifications and validation of analytic and manufacturing equipment; the sourcing, storage, handling, and labelling of ingredients and final products. However, and as with GLP-laboratories, there is a requirement for a massive volume and variety of documentation. Thus, a typical GMP facility will have Master Formulae and master validation plan and volumes (reaching the size of large manuals) of Standard Operation Procedures (SOPs) and Protocols related to many and various technical, analytic, engineering, and manufacturing procedures and specifications (Vinck, 2003)²⁶.

GOOD CLINICAL PRACTICES AND THE DOCUMENTATION OF BIOEQUIVALENCE AND THERAPEUTIC EFFICACY

Similarly, Good Clinical Practices (GCP) regulations also places much emphasis upon documentation (Carson, 2007; McFadde, 2007). Studies conducted through GCP regulations and GCP-certified sites have huge epistemic significance in relation to the filling-in of the Product Dossier Form. The studies conducted at these sites are important because they test and provide data on the therapeutic equivalence of a generic drug and a comparator (an already licensed drug). To establish bioavailability/bioequivalence, with some exceptions, pharmacological studies must be conducted through GCP-compliant clinical trials and Regulatory Analytical Procedures (RAP). By clinical trial what is meant is: a systemic study of pharmaceutical products in human subject(s) and volunteers, in order to discover or verify the clinical, pharmacological (including pharmacodynamic/pharmacokinetic), and/or adverse effects, with the object of determining their safety and/or efficacy (Central Drugs Standard Control Organization, 2005).

²⁶ For significance of protocols, see: (Chaloner-Larsson, et al., 1997).

The process of conducting these bioavailability/bioequivalence studies is subject to an impressive degree of technicality, regulatory control, and documentary auditing (Niazi, 2007). This complexity is such that, as with studies conducted in GLP-laboratories, a great deal of clinical/pharmacological documentation is done and provided by specialised, commercial RCOs, Quality Assurance Units, Institutional Review Boards, and various and sundry software tools and models, and teams of experts from the pharmaceutical sciences—e.g., clinicians, pharmacologists, pharmaceutical engineers, statisticians, and etc. (Carson, 2007; Niazi, 2007; McFadde, 2007). This network is responsible for co-authoring such documents as the study design protocol, investigator brochures, study-subjects consents forms, adverse-effect case-reports, and other documents related to Clinical Safety Data Management(CSDM) needed to be fill-in the Product Dossier Form.

Thus, for applicants to pre-qualify for the WHO's Prequalification Programme, constructing, or having access to, certified GMP, GLP, and GCP spaces is pivotal. Without these spaces, applicants cannot fill-in the Product Dossier Form required by the Expert Committee to pre-qualify a given, generic product or supplier. Thus, for the purposes of the Programme, a generic drug is an artefact that has emerged from translations in specific, geo-regulatory spaces, or "Truth-Spots", designated by the Expert Committee on Specifications as having legitimacy to construct knowledge appropriate for the technical requirements and documentary aesthetics of the Committee's Product Dossier Form.

TECHNICAL DOCUMENTATION AND THE ROLE OF EXPERTISE AS A GOVERNING TECHNIQUE

Thus, the Prequalification Programme places much emphasis, and gives much power to, technical "epistemic communities". The Expert Committee on Specifications has immense power of legitimisation, understood in two ways; legitimation in the sense of the "structural power"

(Strange, 1988)²⁷ to decide on what type of knowledge and technical practices are accepted as legitimate to construct generic drugs and fill-in its Product Dossier, and secondly, as a certification process to legitimise specific places as “Truth-Spots”—as regulatory sites adequately reliable to be presume to have material and epistemic equivalence with referents situated (culturally and epistemically) in Euro-American states. This power, in and of itself, does not have an *a priori*, normative value; as suggested above, the Prequalification Programme and its technical standards emerged to address important procurement issues that UN-agencies faced and as a means to limit the potential harm posed by risky drugs that were circulating in Africa and elsewhere and were being marketed as having therapeutic properties that they did not have. The Programme was a mechanism to “pre-qualify”, and attempt to license and regulate the quality, safety, and therapeutic efficacy of a massive volume of generic drugs that were flowing into such places as Africa. However, the point about “structural power”, and the epistemic, institutional power of the Programme and Technical Advisory Committee is, rather, one of participatory, “deliberative democracy” (Elstub and McLaverty, 2014) related to the construction and deployment of expertise as governing technique. By deliberative democracy, what is meant is the process of expanding the spaces for a plurality of voices, lay and expert, local and global, to meaningfully engage in the decision-making process and deliberations related to the construction and legitimatisation of knowledge—especially when its touches on forms of expertise that have disciplinary or regulatory power. With respect to the Prequalification Programme, this entail, among other things, interrelated epistemic, cultural, and governance dimensions.

The epistemic dimension relates to the extent to which local, knowledge practices and regulatory standards from Africa, and other places in the Global South, are adequately taken into

²⁷ This encompasses, following Susan Strange: “what is believed (and the moral conclusions and principles derived from those beliefs); what is known and perceived as understood; and channels by which beliefs, ideas and knowledge are communicated—including some people and excluding others...[that is to say] if a production structure determines what is produced, by what means, by whose efforts and on what terms, so a knowledge structure determines what knowledge is discovered, how it is stored, and who communicates it by what means to whom and on what terms.” (Strange, 1988, p.119)

account in the construction and formulation of the Committee's technical standards. As suggested above, there does not seem to be much consultation with, or participation from, regulatory and epistemic communities from Africa in the design of the Expert Committee's standards and regulatory techniques: the Committee mostly relies on standard forms and guidance documents from the International Conference on Harmonization, which, in effect means it relies on, overwhelmingly, the epistemic practices of Conference's Expert Working Groups (EWG), composed of Euro-American "Stringent Regulatory Authorities" and expert communities from the International Federation of Pharmaceutical Manufacturers Associations (IFPMA). This overrepresentation of Euro-American, epistemic communities relates to and is directly tied to wider cultural issues about the socio-cultural "construction" medicinal artefacts, that are widely noted in Medicinal Anthropology and STS scholarship (Becker & Geissler, 2009; Ember & Ember, 2004; Geissler & Molyneux, 2011), mainly; the increasing marginalisation, by virtue of such issues as colonisation, globalisation, and the political economy of the global pharmaceutical industry and medical practice, of "alternative" therapeutic practices located (culturally and geographically) in the Global South; i.e., practices that do not strictly, or to lesser degrees, conform to or legitimise themselves on biomedical models of pharmacotherapeutic intervention of the type deployed and relied upon by the Technical Advisory Committee. Relatedly, these issues are connected to the governance model of the Prequalification Programme. By narrowing its specifications on the technical standards of the International Conference on Harmonization, and the biomedical and pharmacotherapeutic epistemology that underlie its standards, the Prequalification Programme engages in an exclusionary process—by design or, as is more likely, effect—of marginalising and de-legitimising epistemic and cultural practices that do not conform to Euro-American referents.

To be clear, this is not say that Programme's standards are technically defective, or that they are somehow immoral, or necessarily oppressive—for, that is clearly not the case for reasons already given. The point is a bit more descriptive; it is to highlight the structural power of the

technical standards that the Programme sets, and to note its Euro-centric orientation at an epistemic, cultural, and regulatory level and pose question about the space its allocates for voices, places, material practices, cultural norms, that are situated at the margins of its technical epistemology and geo-regulatory and documentary practices. By requiring that only artefacts manufactured and analysed in GMP, GLP, and GCP sites count as legitimate “generics”, some of the risks posed by generics manufactured in the Global South has been managed, but it has also meant that a great many manufactures and governments in the South, especially in Africa where there is much dependence on Global Fund grants for HIV/AIDS Programmes, have been made subject to an epistemic community, knowledge practice, and a regulatory regime that they had limited role in constructing. A case in point is with Africa.

WHAT OF AFRICA? THE PREQUALIFICATION PROGRAMME, THE LACK OF TRUTH-SPOTS, AND AFRICAN GENERIC MANUFACTURERS

African pharmaceutical manufacturers have struggled to participate in the Prequalification Programme. This has been due to one primary factor, among many others (as the AU's regional plan recognised); the lack of and limited access to certified sites of production, laboratory analysis, and bioequivalence studies. Although, some GMP facilities have been constructed in certain African states (noticeably in South Africa, Kenya, and Ghana), often in partnership with or as a subsidiary of Asian companies, there are very few GCP-complaint centres in Africa; the exceptions are in South Africa and, until very recently, Kenya and Nigeria (Guindo et. al, 2012). This has meant that very many manufacturers have not had, and in many ways continue not to have, affordable access to centres where they can conduct bioequivalence/bioavailability studies and establish the therapeutic efficacy of their drugs (studies required to fill-in Module 5 of the Common Technical Document dealing with Clinical study reports). This aspect of certification remains a technical and regulatory activity that is conducted outside of the continent and often at immense financial cost. And without affordable access to GCP centers, the ability of African drugs to travel

outside of their local spaces and participate in global programmes has been considerably limited, or placed at a considerable comparative disadvantage with respect to other manufacturers in Asia and, increasingly, also Europe. Their drugs, their techno-scientific artefacts, have largely remained localised; lacking Truth-Spots to facilitate their legitimization and grant them a presumption of equivalence with other artefacts constructed in translated elsewhere (World Health Organization, 2012).

SUMMARY:

The Prequalification Programme deploys two things as to govern the translational production, procurement, and circulation of generic, HIV/AIDS drugs: documentary (that is, the Product Dossier and Common Technical Document) and spatial practices (that is, certified GMP, GLP, and GCPs, sites) as a geo-regulatory technique, Truth-Spot, and means to legitimate the epistemic claims and material productions of generic manufacturers from post-colonial states. Certified sites translate local knowledge and artefacts into transnational, techno-scientific, and regulatory objects capable of legitimate circulation and acceptance—that is, capable of being deployed in the procurement programmes of Euro-American states, UN-agencies, the Global Fund, and recipients of its grants. The Product Dossier provides a technical and documentary aesthetic that goes beyond text: the production and work around the Dossier, itself, is a micro-technique of governance.

CONCLUSION

Since the early and mid-2000s, two principal regimes have emerged to regulate the production and certification of generic HIV / AIDS drugs going or used in Africa as part of multilateral, procurement programmes: The Prequalification Programme and the Global Fund. The former has mainly concentrated on pre-qualifying products, whereas the latter has been the principal financing vehicle through which these products are procured. In time, because of formal

arrangements and the intersection of their activities, the two regimes have become increasingly co-dependent and, in the process, have established a powerful institutional and governance regime of considerable impact in the productive activities of various and many African pharmaceutical manufacturers.

This regime has governed through technical documentary practices and certification procedures based upon particular sites of production and analysis. To prequalify, participants in the regime have had to show that their artefacts are safe and have adequate quality and therapeutic efficacy by, *inter alia*: manufacturing samples in GMPs facilities, analysing them in GLPs laboratories, demonstrating bioequivalence in GCPs centers. They have been required to fill in a Product Dossier, based upon a Common Technical Document format, with data derived from samples manufactured and analysed through those certified places. These practices have constituted a species of geo-regulatory governance that many African manufacturers have been made subject, but have struggled to satisfy, function, or operate in; because many African countries lack one or all of the certified places, they have not been capable of filling in the Dossier, or least doing so in an affordable manner, and have thus been largely excluded from participating in multilateral, procurement programmes.

As the African Union's Pharmaceutical Manufacturing Plan for Africa (PMPA) has, rightly, acknowledged, these deficiencies are not only significant because they hamper the ability of African countries to locally manufacturer generic HIV / AIDS drugs; they are also significant because they indicate deficiencies in Africa's industrial base, and highlight a wider problem about the ability of African states to generally provide affordable access to essential medicines to their citizens, and to effectively and rapidly respond should another public health emergency arise of similar magnitude to HIV / AIDS. For, this lack of domestic capacity has meant that, for more than 20 years, African states have been almost wholly dependent on the generosity, or political decisions and commercial choices, of others—most especially European and American states that have not, for a number of

occasions, been willing or incapable to provide Africans with the assistance they need in prompt fashion and impartial fashion. Even when they have intervened, they have subjected African states and industries to technical standards and rules, particular types of expertise and requirements, which have been formulated and designed without, or with minimal consultation and participation, by African states. Like TRIPS, the result has been that African states have been made subject to particular regulatory and epistemic geographies of power that have had immense influence in the political choices and social cultural and economic life of Africans.

CONCLUSION

This thesis has examined the history of HIV/AIDS in Africa and the global, regulatory response to it, especially around debates about access to, and the local production, importation, and governance of, generic HIV/AIDS drugs. These issues were unpacked through a mixed, theoretically-informed scholarship, drawn from Science and Technology Studies, Post-Colonial Studies, and Legal Geography. However, the aim was not to bring new theoretical insights to this scholarship. Rather, concepts from this scholarship were used to examine the thesis's three main, research questions.

- 4 To what extent did Africa's colonial encounter with European science inform how scientific knowledge about HIV/AIDS was constructed, read, and contested in the Africa?
- 5 How did the colonial encounter and postcolonial struggles with European law in Africa, specifically around the global patent regime, shape the global response to HIV/AIDS and debates about access to and the local production of generic drugs in the continent?
- 6 How did the political economy of these struggles influence the global governance of the production, importation, and certification of generic HIV drugs in Africa?

Accordingly, the major theoretical concerns were with coloniality and postcoloniality, the impact of the colonial past on African readings and contestations of scientific knowledge about HIV/AIDS in Africa. Relatedly, the impact of the colonial past on the political economy and debates about access to, the local production and governance of, generic HIV/AIDS drugs. As many of these issues had a spatial dimension, the other theoretical concerns were on the epistemics of place and cultural/political geography and the institutional power of scientific and legal expertise.

Specifically, the main focus and original contributions were on the historiography of HIV/AIDS in Africa and the global governance of generic HIV/AIDS drugs. Thus, it focused on Project SIDA, the first major research project on HIV/AIDS in Africa, and, secondly, the

WHO Prequalification Programme, the principal regulatory regime that governs the production and certification of generic HIV/AIDS drugs used for UN-treatment programmes in the continent.

COLONIALITY/POST-COLONIALITY, TRUTH-SPOTS, THING-KNOWLEDGE, AND GEO-LEGAL TECHNIQUES

Thus, on a wider theoretical point, Project SIDA and debates around access to and governance of generic HIV/AIDS drugs were explored through a postcolonial critique. This was defined as an academic, critical engagement with the shadows, traces, remnants, and effects of colonialism on the sociocultural, economic, and political life of peoples were colonised. Following Anderson, this critique traced "multi-sited narratives" or "glocal" enactments of scientific and legal practice. And these examinations were aided by scholarship from Science and Technology Studies, particularly literature on the "Epistemics of place" (Gieryn, 2006); on the relationship or tensions between place and the construction, legitimisation, circulation, and reading of scientific knowledge; or, said differently, on the ways through which the place of construction and translation affects how knowledge is given sociocultural significance.

Two techniques of negotiating this epistemics were described: the construction of Truth-Spots and/or the deployment of Thing-Knowledge. The former relates to practices to standardise the material sites within, and the practices through which, knowledge is constructed, and given a presumption of epistemic equivalence or "placelessness"; whereas the latter touches on instrumentalised means (such as, machines, equipment, tests, standards, and etc.) to make knowledge "push-bottom simple", and enclosed within a particular artefact or internal logic of knowledge production and legitimisation—a "test result". Through these techniques, it was argued, scientific knowledge is (potentially) "blackboxed", made more mobile, and treated As If it is placeless; As If it lacks origin, is not subject to geographies of reading, and transcends the epistemics and contingency, and historicity, of place. Similarly, the movement of legal practice (i.e., the circulation of generic HIV drugs and travel of patent law to Africa) was analysed through

exploration of the relationship and intersections between legal practice and place; that is to say, the means through which law deploys space as a juridical and governing technique (a “geo-legal” or “geo-regulatory” techniques), and ways that the places through which law is enacted or read co-constitutes or informs the practice of law.

Whether analysing the epistemics of place or geo-legal techniques, the spatial dimensions of science and law, respectively, were not explored simply to highlight their spatiality. It was done to tease out relationships of power in epistemic practice and to reflect and shed light on wider, political and sociocultural processes that engaged by or constructed by these practices (for example, with respect to geopolitics, political economy, social exclusion, race, gender, coloniality and postcoloniality, and etc.). A good example was, and the thesis began by investigating, Project SIDA and African readings of its knowledge.

PROJECT SIDA, TRUTH-SPOTS, THING-KNOWLEDGE, AND THE MOVEMENT AND READINGS OF HIV/AIDS IN AFRICA:

Project SIDA was the first, major AIDS-research project established in Africa by American and European scientists. It moved HIV / AIDS, as an epistemic project, from the United States to Africa and was subject to multiple geographies of reading. The multiplicity of readings was a function of: the heavy and laboratory-intensive definition of AIDS in the early 1980s and the effects of colonial science, or rather social memories about the racism of colonial science, on African discourses about European knowledge. These discourses were only suspended or circumvented by the availability of the first HIV blood-screening kits, which translated AIDS into Thing-Knowledge, made it more mobile and agile, and less dependent on expensive Truth-Spots and susceptible to the cultural and political geography of Africa (at least for the Euro-American scientists that were deploying it).

The diagnosis of AIDS was difficult, particularly before the isolation of HIV and the licensing of the first blood screening-kit for the virus in 1985, because of the “heavy”, laboratory—intensive definition of AIDS in the early 1980s. To diagnose AIDS, according to the laboratory procedures stipulated by the CDC, one had to diagnose “indicative” AIDS-diseases, establish t-cell counts, and exclude a number of AIDS-like pathologies before the completion of clinical diagnosis. This definition made it hard for AIDS to be diagnosed in Africa as a great many African states lacked the required facilities and equipment, the prerequisite “Truth-Spots”, to diagnose AIDS according to the particular epidemiological definition of the CDC. And, even where Truth-Spots could be established (as was the case with Project SIDA) the tropical diseases of Africa, some of which had similar symptomatology to AIDS, and the “genetic makeup” of Africans, made the travel of AIDS from Africa, back to Europe and America, problematic: discourses about African difference, claims that Africa's epidemiological and tropical environment was too different from Europe and the United States, limited the extrapolative applicability of knowledge constructed in Africa and on Africans, to European and American contexts.

However, one of the biggest challenges that Project SIDA faced was social memories and discourses about colonial science in Africa. The work of Project SIDA, and Euro-American scientists working in Africa in the 1980s generally, was accused of being tinged by the racialised—and, indeed racist—discourses and imaginaries of colonialism; especially when it came to contestations about the Out of Africa theory of AIDS, the theory that Aids originated in Africa because of the peculiar "tribal" and customary practices and dietary habits of African communities, such as the eating of bushmeat, and that its rapid spread in Africa was the result of the highly sexualised and promiscuous nature of African culture— suggested by the high rate of sexually transmitted diseases diagnosed on African men.

For, before Project SIDA, a great deal of Africa's encounter with European science occurred as part of the colonisation process, which was facilitated by the technical expertise of

scientific and medical communities, particularly those who established the discipline of and practiced Tropical Medicine. Because these communities were often embedded with colonial administrations and armies, and because their work intertwined with and drew from many of the disciplines of scientific racism that emerged in the 19th century, it became difficult to separate their technical activities from their political aspects (i.e., the “Civilising Mission”). Like other disciplines of scientific racism, their epistemology, and studies and treatment of Africans, or non-European peoples generally, was deeply coloured by the colonization project, and its racialised discourses and imaginaries of Africans as Other; as less socioculturally and racially evolved, and as pathologically dangerous to the European race and body-politic (in sense of being carriers of foreign viruses, pathogens, and diseases). Their epistemology was so tied to these discourses that the universalist discourses of European science were replaced, largely, with racialised, local translations of knowledge, which were shaped and moulded by the particular “micro geographies” and political and sociocultural context of colonies:

Thus, by accusing European and American scientists of racism in 1980s, African readings of, and contestations about scientific knowledge related to HIV / AIDS in the 1980s, were coloured by the colonial past. They were making links between postcolonial struggles and the colonial encounter. Rather than viewing postcoloniality as a break from this past, they were representing their resistance to European and American knowledge in the 1980s, as a continuation of colonial experience. Like the colonial past, they argued, Africans were, again, being represented as carriers of disease, as biological risks to the European and American body politic, and etc.

The isolation of HIV in 1984 and the subsequent licensing of the first HIV-blood screening kit in 1985, however, “blackboxed” European, scientific knowledge about AIDS and made the travel of AIDS, as an epistemic project, more agile and mobile, and made it more capable of bracketing discourses about the colonial past, or more broadly, the friction of political and cultural geography. The kits turned AIDS from a heavy and laboratory intensive artefact into a

species of "Thing Knowledge"; an instrumentalised type of knowledge that made place, or sought to make questions about place, irrelevant, secondary and subservient to the internalised logic of the kit and knowledge that it blackboxed and generated. With that, there was a rapid proliferation of sero-epidemiological programmes in Africa. Many and various European institutions and scientific communities screened Africans for HIV, and a huge body of knowledge, epidemiological statistics and reports, were compiled and distributed around the world, highlighting and making visible HIV / AIDS in Africa. By the late 1980s and early 1990s, this epidemiological work was of such a scale that a permanent epistemic community and multilateral programme was established at the United Nations: UNAIDS, co-sponsored by The Office of the United Nations High Commissioner for Refugees (UNHCR); United Nations Children's Fund (UNICEF) World Food Programme (WFP); United Nations Development Programme (UNDP); United Nations Population Fund (UNFPA); United Nations Office on Drugs and Crime (UNODC); International Labour Organization (ILO); United Nations Educational, Scientific and Cultural Organization (UNESCO); World Health Organization (WHO) World Bank UN Women.

TRANSNATIONAL PATENT GOVERNANCE AND THE MULTILATERAL REGULATION OF GENERIC HIV/AIDS DRUGS

Although HIV / AIDS in Africa was widely reported on and was very visible by the late 1980s, this visibility meant little in terms of mobilising American and European states towards providing, or assisting African states to provide, affordable access to medicines in Africa. Instead, two geographies of treatment emerged; a United States and Europe, where there was almost, universal access to treatment; and Africa, where seropositive populations were left to fend for themselves in circumstances where the state, facing sovereign debt crises and the demand of structural adjustment programmes by its creditors, had removed itself from obligations to provide public healthcare and, by design or circumstance, had delegated this function to Euro-American NGOs, UN-agencies, and individuals and their social networks and connections.

Accordingly, the earliest programmes to provide treatment to Africans, and to import en bulk HIV / AIDS drugs into the continent, were started and managed by UN-agencies, noticeably UNAIDS and the World Health Organisation (WHO). These "drug access schemes" had limited success and were influenced, and arguably hampered by, the global patent regime that had recently been instituted with the coming into force of the TRIPS agreement in the 1990s. Because of it, these agencies had to speak the language of patents, depend upon the generosity of Euro-American multinational corporations, who held patent rights over, and were the sole manufacturers of, the drugs that they wished to import into the continent.

The TRIPS agreement subjected political decisions related to public health policy, especially about pharmaceutical patents and the issuance of compulsory licences, to the extraterritorial control, supervision, and juridical discipline of the World Trade Organisation (WTO); or, more accurately, the multinational corporations' of Euro-American states that drafted, promoted, lobbied extensively for the adoption of the agreement. The Agreement (specifically art.31) posed particular problems for African states that lacked the domestic pharmaceutical capability to locally manufacture generic drugs by placing legal restrictions on the ability of these states to import drugs from elsewhere (TRIPS-signatories, not facing a national health emergency, were, in effect, barred from issuing compulsory licences to export generic drugs to countries that lacked the local capacity to locally manufacture them). This meant that those without the capacity to locally manufacture could not the drugs while those with the capacity were stopped from exporting them.

Although a package of reforms to the agreement was agreed in the early 2000s (many parts of which are not yet ratified), the reforms (specifically the Decisions implementing the Doha Declaration) did little for African countries without adequate, domestic, pharmaceutical-manufacturing industry. For example, waivers were agreed to suspend the application of many sections of the TRIPS agreement, covering pharmaceutical patent rights, for the benefit of Least

Developed Countries; and these countries (a great many of which were in Africa) were further granted wide discretions to issue compulsory licences and manufacture generic drugs at times of national health emergencies. However, because they lacked the means to actually manufacture drugs, this discretion was largely redundant. The significance of the waivers and Decisions lies more with how African states, or generally TRIPS-signatories, with some pharmaceutical capability were regulated. The national discretions afforded to Least Developed countries (to those without the capacity to use this flexibilities) were not extended to countries with capacity. These countries were, instead, regulated further and made subject to added extraterritorial supervision; apparently so that they did not pose a commercial risk to Euro-American, pharmaceutical industries (particularly to the licensing income that they derived/extracted from patents not just in Africa, but countries of Global South, generally).

In addition, this political economy was reinforced by the multilateral institutions that were established in the early 2000s by Euro-American states to fund, procure, regulate, and certify generic HIV / AIDS drugs locally made or imported into Africa, mainly: the Global Fund and the Prequalification Programme. These regimes developed regulatory mechanisms that relied on technical, documentary practices and geo-regulatory techniques— i.e., the certification and inspection of GMPs facilities, GLPs laboratories, and GCPs centers—that African pharmaceutical industries, and regional and national plans to locally manufacture generic drugs, have struggled to satisfy. Accordingly, these industries have had limited participation in this multilateral regime and a great many African states continue to be overwhelmingly dependent on the importation of pharmaceutical products, especially active ingredients, and continue to lack the means to provide affordable access to not only HIV/AIDS drugs, but to many other essential medicines and treatments that are specific to the public health needs of African populations.

COLONIALITY AND POSTCOLONIALITY AND THE TRANSPLANTATION OF PATENT LAW TO AFRICA

However, this political economy, and the transnational patent regime within which African states and UN-agencies operated, was not particularly new; it had a history and connections with the colonial encounter. As Postcolonial Studies scholarship has indicated, law, legal practice and doctrines, played important roles in legitimising and in some ways regulating the European colonisation, military occupation and conquest, and, eventually, partition of Africa among European states. And, as with colonial science, the universalist discourses of European law, particularly as you related to the sanctity of the doctrine of territorial sovereignty, were translated and made to fit the particular political project and military objectives of colonisation. And legal practice constituted and was simultaneously co-constituted by the "micro-geographies" of the colonies, and, relatedly, drew from the disciplines of Scientific Racism that emerged in the 19th century, particularly with respect to their representations and treatment of Africans as Other in their epistemology.

Besides scientific, technical knowledge, legal practices played an important role in the colonial process. Law, much like scientific racism, was complicit in the construction and perpetuation of racialised discourses and practices about Africans. And these legal practices, such as the doctrine of effective occupation, were deployed to justify and facilitate the violent, militaristic occupations and subjectification of African lands and peoples (i.e., "the Scramble for Africa"). This was achieved through a "dynamics of difference": European law was applied and read differently according to where it was enacted and against whom it was directed.

Because Africans were not recognised as having the prerequisite sociocultural and indeed racial properties, to be equal, sovereign members of the European, Christian "Family of Nations", they were treated differently under, or placed outside the boundaries of, European law. In that, because they were presented as lacking sovereignty, the basic principles of European law, such as the doctrine sovereignty, were argued to not apply to them and, as such, they could only be objects and subjects of international law vicariously; it was only through incorporation, via conquest or

effective occupation, into the legal personality and sovereignty of a European state that Africans, as subjected and colonised peoples, could join the European “Family of Nations”. Once joined in this manner, European law, including patent law, travelled into the colonies, and the colonies were brought into various, transnational legal regimes, such as the Paris Convention, that European states established in the late 19th century. African peoples had no, or minimal, say in this colonial act.

From the 1960s, postcolonial, African states attempted to reform, or disassemble, the institutions and structures of this colonial act. They did so as part of a bigger, global movement, or campaign for New International Economic Order, by postcolonial states to, among other things: claim equal standing with European states under international law; demand compensation and restitution for harms committed during colonisation; and stop extraterritorial interventions in, and assert their sovereign and territorial rights over, their political decisions, including most especially with respect to economic policy and industrialisation and, as a corollary, patent law. As part of import- substitution- industrialisation plans, framed through techno nationalism and plans to establish "self-sufficient" domestic industries (e.g. African Union's Lagos Plan), patent law was seen as an integral element of their project erase the traces of the colonial past and build new, postcolonial futures and nations.

Thus, in 1960s and 1980s, African states supported a global campaign to nationalise and territorialise transnational patent governance (much like European states did in the 19th and early 20th century). They supported calls for the Paris Convention to be reformed and for plans to reinforce and expand its provisions that granted greater national discretion and control over, among other things: the national enforcement of the provisions of the Convention; the exclusion of particular industries and types of technical knowledge, such as that related to pharmaceuticals, chemicals, and foodstuff from patentability; the requirements for local working requirements and

technology transfer as a condition for patentability; the limitations on the lengths of patents; and etc.

The Euro-American response to this campaign in the late 1980s was, however, aggressive and comprehensive in the manner with which it deflected and fought off this campaign and managed to establish a new multilateral patent regime: TRIPS. This regime specifically targeted attempts to nationalise patent governance and use patent law as a tool of industrialisation strategy. Under the new regime, local working requirements were banned; restrictions on subject matter of patentability were considerably limited, and expanded to include "all fields of technology"; national discretion to enforce the agreement was circumscribed and placed under extra territorial supervision; border measures to intercept and contain the circulation of "pirated" goods (artefact manufactured in breach of the provisions of the agreement) were expanded and made compulsory on all signatories; national discretion over the exercise of public policy derogations, including and most especially related to public health and the issuance of compulsory licences, were regulated and also made subject to extraterritorial, juridical discipline. In short, nearly everything that postcolonial states called for in 1980s was rejected and in many ways made illicit under TRIPS.

For African governments, the state of affairs was not too dissimilar to that of colonialism. Much like the patent registration systems of colonial regimes, and the incorporation of African colonies into the Paris Convention, Africans had minimal say in the construction of the legal regime under which they were made subject; they were governed by various extraterritorial techniques that denied them any meaningful sense of sovereignty over a significant areas of their economic and social life; and the rationales and discourses that were used to legitimise the construction of the regime (arguments about postcolonial geographies being "lawless" spaces of illicit production and circulation) operated through a dynamics of difference; and African states were (re) made into, in effect and by virtue of the global political economy of patent, de facto registries and repositories of Euro-American patents and systems of knowledge.

HIV/AIDS AND INTERSECTIONS OF SCIENCE, LAW, AND COLONIALITY

In conclusion, the history of HIV/AIDS in Africa and the political economy of debates about access to and governance of generic HIV/AIDS drugs were coloured by the traces of the colonial past. And the travel and transplantation of European patent law to Africa, and the incorporation of Africa into global patent regimes, was facilitated by colonisation. In addition, the subsequent contestations that erupted in the late 1990s and early 2000s about the TRIPS agreement, and the multilateral governance of generic HIV / AIDS drugs, was tied to this colonial past. African readings of scientific knowledge about AIDS, and African contestations about the TRIPS agreement, and African difficulties in satisfying the geo- regulatory techniques of the Global Fund and Prequalification Programme, was shadowed by the effects of colonialism and a subsequent struggle by postcolonial, African states to erase or confront the institutional remnants and racialised discourses and imaginaries that it left behind.

These remnants thus became actants, institutional and sociocultural factors that influenced the travel and readings of scientific and legal knowledge about HIV/ AIDS in Africa. They led to multiple readings and translations of knowledge, and the deployment of multiple geo-epistemic and regulatory techniques (e.g., Truth-Spots, Thing-Knowledge, certified manufacturing facilities and laboratories) to circumvent or negotiate these readings. However, despite their deployment, the effects of the colonial past remained salient and continued to influence how AIDS travelled and was translated as an epistemic project, object of global regulatory practice, and intersection of coloniality and postcoloniality.

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