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## Chapter 12

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# Parasite Lost: Remembering Modern Times with Kenyan Government Medical Scientists

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## Introduction

### *Patience*

Visiting Kisumu in western Kenya, I pass by the station of the Ministry of Health's Division of Vector Borne Diseases (DVBD) where 15 years ago I conducted research on worm infections with a group of Kenyan and European scientists.<sup>1</sup> The offices and laboratories, situated adjacent to the District hospital in the centre of Kenya's third largest city, were built between the 1930s and 1970s. In the early 1990s, we were still able to conduct simple scientific research on body parasites here, and the laboratory staff were busy. In the early years of the twenty-first century, the place is quiet. The compound, shaded by mature trees, some planted to commemorate the departure of the last British scientist employed by the Division up to the 1970s, others to mark the launch of overseas collaborative projects in the 1990s, is poorly maintained since the last 'groundsman' – who had continued cleaning the place well past his retirement – succumbed to old age. Among patches of high grass and bushes stand the dusty wrecks of vintage Land Rovers recalling past movements and achievements.

The DVBD is the section of the Ministry of Health in charge of the control of diseases such as malaria, sleeping sickness, bilharzia, worms and viral infections – the most common diseases affecting Kenya's citizenry. With the

headquarters in Nairobi and about fifty stations across Kenya, DVBD employed about 300 staff in 2004 (down from about 800 in the early 1980s). Most of the employees are approaching retirement, and resources are scarce. Thus, DVBD Kisumu has no transport, no reagents or basic laboratory equipment and no functioning means of communication as telephone lines were closed down for unpaid bills some years ago.

The gate, guarded by the security officer of an overseas research institution using one of the outbuildings for cool storage of specimens, is nowadays rarely opened for cars. A signboard beside it lists, underneath 'DVBD/MoH', the US Army's 'Walter Reed Project', which used to collaborate with the DVBD, and the 'Kenyan-Danish Health Research Project', DVBD Kisumu's last larger collaborative project. Some staff members sit beside the gate, observing the traffic outside and greeting passing acquaintances. The water tap outside the main building is running continuously – if there is water – to fill jerry cans for the staff members living in areas with erratic water supply.

The DVBD, formerly DIBD (Division of Insect Borne Diseases), originated in 1938 as Yellow Fever Control programme, slightly ahead of the other 'East African Research Organisations' founded in the wake of the 1940 Colonial Welfare and Development Act (see Clarke 2007). It is the oldest medical research institution in Kenya and internationally leading in the field until 1978, after which the Kenyan Medical Research Institute (KEMRI), one of a new generation of 'parastatal' research institutes established at the onset of neoliberal restructuring, gradually took the helm of scientific research from government and academic institutions, through collaborations with transnational 'partners'. DVBD's main mandate is parasitic disease surveillance and control of insect and snail vectors of disease; as part of these activities, initially as a pastime of its then British officers, it conducted research, discovering, for example, the liver-stages of the malaria parasite, or the ecology of the blackfly that carries river blindness. After Kenya's independence in 1963, the Division maintained its mandate, led by an emerging new generation of Kenyan scientists. When, due to economic crisis and austerity policies, funds for regular disease control vanished, the DVBD succeeded, because of its skilled staff, to attract collaborative research projects with European and North American research groups, and while the wider health sector rapidly decayed, DVBD staff – at least the staff of stations involved in such collaborations – experienced good, if very unsteady, incomes, and conducted recognised scientific research.

Inside the main building, the heavy prison workshop furniture, fans and half-high oil-paint coating leave no doubt that one enters a post-colonial government institution. The mid-1990s office equipment, left by the last collaborative project, awaits repair. The fridge, no longer needed for specimens, is used for soft drinks. The station head has gone to an NGO-funded workshop, hopefully providing him with new knowledge, contacts and some allowances. In his office, an organogram, drawn at another workshop, places the DVBD within 'District Health Management', one of the buzzwords in the 1990s 'decentralisation' of the national health system. In the laboratory, two men work at a microscope, reading slides for a malaria research project by an overseas university collaborating with KEMRI, to which they were seconded; other men sit and chat with visiting friends. One takes the result of a malaria test, scribbled onto the corner of an exercise book, to a relative waiting at the gate. At 10 am, as every day, the secretary prepares and serves tea. The scent of milky, sweet tea with a little 'Nice' biscuit on the saucer, evokes lost times – remembrance of my own past with the DVBD and historical memories far beyond that.

During the 1990s boom of collaborative research projects, staff members attained higher academic degrees in European universities and even subordinate staff earned many times their salary through daily allowances paid by 'projects', initiated by overseas agencies (as opposed to national government). This age of bounty ended around the turn of the century due to a somewhat unstable political climate, to new mechanisms of collaboration and funding, and because of changes in medical science: in 1994, trained laboratory technicians with a microscope and cheap reagents could make a decent contribution to parasitology and epidemiology, and – through integration into government – to public health; post-millennial science, by contrast, has become focused on clinical trials that usually are designed transnationally, under the leadership of European and North American institutions, charities and corporations; such trials rely upon big sites with large populations under demographic surveillance, they need sophisticated, expensive and rapidly changing immunological and genetic laboratory equipment, and they are regulated by internationally agreed standards such as ISO or 'Good Clinical Practice'; they require highly controlled environments – both to produce internationally recognised science and to manage large funding flows and staff bodies; and their results are directed towards 'global health' policies rather than immediate utilisation by

local public health authorities. In this age of ‘big science’, DVBD with its ties to government and its public health mandate is a less suitable partner than the pure research institutes – ‘parastatals’ – that were founded from 1978 onwards. Deprived of government funds and overseas support, the DVBD became unable to produce science.

For the people left in the station, a former colleague’s visit rekindles memories of fieldwork and after-work social life, of regular incomes and educational opportunity; and they are curious to hear whether I may be starting new research: ‘Bring a project, we are ready, we can work!’. My employment with the London School of Hygiene, where so many earlier DVBD scientists had come from or gone to, raises expectations that I cannot fulfil; unable to bring a new scientific project, we decide at least to have the building painted, which has become a source of embarrassment to the staff. Especially in contrast to the flash premises of the many HIV research projects and NGOs that have emerged in Kisumu during the past decade, the simple and so obviously governmental buildings of the DVBD are more than a little out of date. Buying the paint and seeing the work progress, we remember the days when we had commenced our last project in 1994. This was a different time, we concur, as we wait for the tea. It is delayed because the council has cut off the water supplies. In the meantime, the secretary plays ‘Patience’ on her ageing project computer.

The present of this public health institution – as for many Kenyan government health institutions – is one of stasis. While the grounds and buildings are quietly transformed by rains, dust and plant growth, the people inhabiting them are plagued by boredom and by their desire to use their skills. ‘We are stuck’, they remark, and their frustration is exacerbated by the thriving cityscape – benefiting from the plethora of NGOs and projects that HIV has brought to the city – that expands outside their gate. Behind this present are memories of a better past, when the station had a staff of fifty people and four vehicles, when the men began the workday at dusk and gathered for drinks in the evening, when international scientists visited and Kenyan staff presented their work overseas, and when the DVBD was part of projects on various level of scale, comprising local endeavours as well as nation building, modernisation and scientific progress. These are memories of past futures, of aspirations and hopes. Within and beyond the two prevailing senses of time that surround DVBD as I know it – stasis and nostalgia

– there is a third temporality; a sense of future, of directed movement. At this point, this is found mainly in the men's recollections, although it survives in moments of hope as well as in the rhetorics of 'community development' that facilitate engagements with potential funders and workshop audiences. In this chapter I search for this now almost forgotten sense of 'project' – in terms of science, of government and as lived by the people of DVBD. I explore this project through the stories of the 'DVBD men'.<sup>3</sup> Some were told while we were in the field or unfolded as we worked alongside each other. Others I heard in the homes, scattered across rural western Kenya, to which the old men had retired – some as long as 30 years ago. Understanding of our shared history and present predicament, as men of public science, might help us reconsider our sense of direction.<sup>4</sup>

## **People of the State**

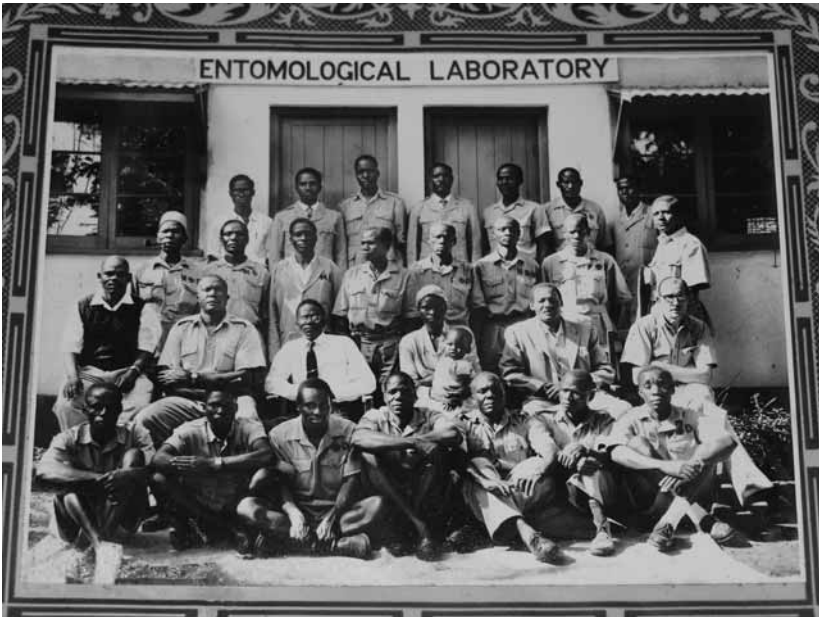
This chapter deals with evolutions in African science and government, seen from the vantage point of a troubled present. Scholarly reflections on the 'crisis of the African state' often ask whether the state – represented as an institutional edifice – exists or not, or is weak or strong, successful or failing (e.g. Zartman 1995; Beissinger and Young 2002).<sup>5</sup> This approach foregrounds static structures of statehood and underrates its openness and potentiality – the promise of the modern state. Spatial imaginaries of statehood – hierarchy, territory, structure – here overshadow temporal ones – process, plan, utopia.<sup>6</sup> By contrast, I will not ask whether the state is there or not, or works or not (nor whether it has been there or not, and when, or if it was effective) – there is no doubt that it still is there, for example, in the form of millions of African civil servants, teachers, nurses, agricultural officers, and that it remains important as a tool of political control, but also as a source of institutions and standards, a potential source of order. Instead of searching and vetting the modern state as a thing, I want to explore it as a project – an anticipation of things to come – as it was lived by the men of DVBD and lives in their stories.

I want to show, through an ethnography of people of the state – rather than, as often is the case, of the people versus the state – that the state need not be seen as a closed edifice, an external entity that stands in some relationship to (civil) society and to citizens, but as a representation of society to itself, an opening towards possible societal futures and a frame for social action. Focusing on the people of the state allows us to locate the workings of government in the everyday work of people and to trace, in their inter-

twined narratives of professional and private life, connected themes and kindred intentionalities or temporalities across different domains and levels of scale. What, in these modern lives, links scientific discovery and public health, educational and economic ambitions and child rearing, is an overall notion of forwardness or ‘generation’. Generation has here, as will become clear in the life stories below, different, interconnected meanings: it is about the essence of enlightenment, the pursuit of truth and engendering of transformation; it is about growth and renewal – of oneself and one’s descendants, and of one’s group and one’s nation; and it is about relations, between young and old. This modern, generative project has withdrawn into our past; to retrieve it, we listen to old men’s tales.

## Old Men of Modern Science

In this chapter I draw upon the life stories of a group of old men from western Kenya – born in the 1920s, recruited by DVBD in the 1940s and 1950s and retired from government service in the 1980s – whom we found



**Figure 12.1:** The Staff of DVBD Kisumu, Around 1962 (photographer unknown) (personal archive, Alfred Lwoba).

through archival documents and younger DVBD staff's advice. Most of these men live in their inherited rural homes or, if they invested some money, in rural settlement schemes, tending their land and cattle. Some have retained a medical role, operate drug shops or diagnostic laboratories, and they tend to be well known and respected in their villages, where most are active in Church and other community matters.

Their rural homesteads, often built from concrete or brick, with painted tin roofs, screened verandas and half-high oil painted walls, citing modernist Kenyan architecture, are easily recognised among the more common mud-huts; they embody their owners' achievements in making modern Kenya, intertwining personal lives and scientific work, domestic growth and the development of the nation. Inside their houses, sofas and armchairs are covered with snow-white embroideries; glass shelves display books and decorative objects; calendars and clocks ornate the living room along with Christian mottos and family pictures, coloured ones of young people with academic gowns, cars and urban backgrounds, and some faded black and white ones of the DVBD's scientific work (Figures 12.1 and 12.2).



**Figure 12.2:** Technologists Bench Training in a DVBD Laboratory, 1960s (photographer unknown) (personal archive, Ambrose Masime).



Guests are generously welcomed here. Visits, commencing with prayers, begin with tea and sponge cakes and proceed with a substantial meal, as customary hospitality would demand. It was during visits like this that our conversations about the Kenyan nation, government and science, historical change and a shared sense of purpose arose. In the 1930–40s, when the men had left school and started working ‘with government’, modern, scientific colonialism had just been conceived (e.g. Cooper 2002); when they retired in the 1980s, national scientific and health structures gave in to the onslaught of economic crisis and austerity policies (e.g. Mbatia and Bradshaw 2003). These memories of better days – when government healthcare worked better than now, when salaries reached almost the end of the month, and when they were young – triggered nostalgia: today, little scientific work is produced by government institutions, and the government rarely legitimises its actions with science (drawing instead on ‘economics’ as justification, or not acting at all); state science workers have become living anachronisms inhabiting ruined institutions.

But what exactly do these elderly Kenyan science-workers long for? Is it the stability of a past material, political and epistemological order, a time with less scarcity and confusion, as some interpretations of postcolonial African nostalgia suggest. If modernity was, as I suggested above, not only a disciplinary order but a transformative project, which was shared across the nation by people with different interests and aims, then maybe these old modern men long less for closures than for openings: not (only) for the past order’s stability and finality but for a past sense of direction and progress, which meaningfully intertwined professional and everyday life, government and science, state and citizens (see, for example Ferguson 1999, Tsing 2004). Below I will explore this proposition; first I will examine the men’s ‘field-work’ in scientific ‘campaigns’, and the social relations of ‘the field’; then I will attend to the men’s self-understanding as men of science and government, and to the relationships between citizenship and political interests, professional and educational curriculum and the personal quest for a modern life.

Before I commence, a note on historical periodisation is on order. The men presented here worked with the DVBD during the half century of the ‘developmental state’ (late 1930s to early 1980s) – embracing both sides of formal independence in 1963: ‘imperialism of knowledge’ (Cooper 2002) and postcolonial scientific national government (see, for example, Om-bongi, this volume). Their biographical accounts did not usually emphasise decolonisation, but the Second World War and the crisis of the 1980s (roughly from the oldest men’s entry into DVBD to their retirement).

Below, I will follow their periodisation and treat the era of developmental modernity as one whole, rather than contrasting the colonial and post-colonial period. The men had certainly welcomed independence, but they experienced it not only as a political change – accompanied by the abolishment of racist policies, not least at work – but as an expansion of the promises of scientific work, accompanied by deepened commitment to a new government and the collective of the young nation, and new responsibilities and opportunities for learning and advancement.

## **Fieldwork Campaigns: 'Doing' Diseases, Making the Nation**

The men's lives were structured by 'campaigns' to research and control pathogens or vectors, such as malaria or tsetse flies. These were delimited geographically and in time (although the timeline often proved optimistic), and one campaign followed the other, accompanied by movements across the colony, and later the nation: 'when we had finished doing malaria in Nandi, we did Bilharzia here in Nyanza ...' (Sawe,<sup>7</sup> 24 January 2005).<sup>8</sup> Some men specialised later, for example in 'mosquito work' or microscopy, but all acquired broad knowledge of tropical diseases: 'I liked all diseases ... There was none that I liked better than the other. I liked malaria because it is a very bad illness. Sleeping sickness also finishes people. I liked it. Coming back to do snail surveys, I liked it ... Because I liked research work, I had to like any that came up' (Otiende, 26 February 2001).

'Came up' could imply newly discovered diseases or epidemic outbreaks,<sup>9</sup> but also the changing directions of international science and new treatment and control technologies which gave rise to campaigns.<sup>10</sup> Not rarely, British scientists and medical administrators decided upon investigations or interventions based on informal consultations and local personal contacts. Later, wider networks including the World Health Organisation and linkages between Kenyan government and overseas development agencies became important to initiate interventions. In spite of many scientific and political changes, this basic pattern of 'campaigns' persisted from colonial times to the present.<sup>11</sup> 'Doing' an illness or insect combined making knowledge and action, aiming towards an endpoint, ideally 'eradication' or 'control'. Campaigns implied, in analogy to military interventions, an enemy and a trajectory from reconnaissance, via engagement, to victorious conquest. In the age of heroic entomology, when DVBD began, the enemies were often

flies and mosquitoes, but the general narrative pattern remained, although vectors and pathogens changed along with politics and economics. The bellicose nature of the task was explicit; thus, when one of the men, then a lab assistant, wanted to become a soldier in the Second World War (getting higher salaries and chances of attaining a medical qualification as a hospital assistant, otherwise prevented by the 'colour bar'), his officer, Garnham, admonished him: 'this place where you are is a war, you can't leave this place and go to another war' (Okonji, 14 December 2004).<sup>12</sup>

To 'go out' to where the problems are, to work in and on 'the field', explore another place and improve it, was at the core of the old men's stories. 'Field' designated an area of investigation and action as well as a territory inhabited by people and pathogens. It was usually a rural area, in agreement with the term's pastoral connotations; an object of study, clearly separated from its scientific observers who resided in town.<sup>13</sup> Thus, although the field in fact often resembled or even included the men's rural homes, it was – probably partly embracing the British officers' viewpoint – constituted as a site of adversity, marked by 'hard physical work' (Okonji, 14 December 2004) and exposure to the elements and diseases during camped life. Despite 'hardship allowances', it carried heroic connotations.<sup>14</sup> The term 'safari' (Kiswahili 'journey') featured in all men's accounts, and it seemed that the



**Figure 12.3:** Officer's Tent with Kisumuead Head of DVBD, 1960s (photographer unknown) (personal archive, Ambrose Masime).

English implications of 'safari': excitement and maleness, expansive spaces and discovery, was cultivated as a source of identity and pride across the colonial colour bar, and shaped DVBD beyond colonial occupation (see Figure 12.3). Travel also meant freedom from local social ties and kinship, and to some extent from supervision by their (until late 1960s white) officers, who often operated from the urban station. 'Safari' captured both the actual travel to and work in remote areas, and a wider sense of movement, of progress and change – of the world and of the men themselves:

Field research [original English]! I liked it better than office work. ... I stayed in the office in the afternoon, but in the morning I went to the field. I really liked the field because the field doesn't make one lazy; it makes the body strong. Someone who walks becomes stronger than someone who just sits in the office doing nothing. (Otiende, 26 February 2001)

Fieldwork implied moving from 'station' to 'the field', where the men spent weeks, returning only to receive allowances and take them to their wives, go to church and organise their farms. With the men, material resources moved out from the urban centres of government and science to the periphery of the rural 'reserve'. The men's fieldwork stories often began with the distribution of equipment at the DVBD station's stores – an iron sheet-protected shed, which at the turn of our century was derelict and presumably empty. These stores, they recalled with marvel amplified by present scarcity, had contained 'everything, flour, oil, lamps, tents, beds, blankets, even guns ... all you could need for the field – we went out with everything' (Luoba, 21 September 2005).

This wealth of instruments and supplies demonstrated the government's resources and capacity. But the stores fascinated the old men not just as a lost cornucopia; they were attracted by the equipment's mobility: loaded on trucks, everything needed for scientific work, accommodation and sustenance could be moved out to where sickness had struck and scientific questions needed to be addressed. This was a portable modernity, a mobile capacity to make known and to act: 'we did not need to go back [to the station]; we even had a mobile laboratory, on a truck, containing everything you need in the field' (Luoba, 21 September 2005) (Figure 12.4). This fascination with the completeness of provisions and self-contained, mobile capacity showed also in enthusiasm for camp life, which seemed to have been shared across ranks, and which remained a feature of DVBD until the 1980s (Figure 12.3). Camp-



**Figure 12.4:** Mobile Laboratory, 1950s (from ‘DDT vs. Malaria’) (photographer unknown).

ing moves one right out into the field, yet the independent, mobile and non-local nature of tents, camp-beds and kerosene stoves marks a clear separation from the stable local environment. Camping creates a community of ‘field men’ who lead, in principle, a self-contained existence without relying on or relating to local communities. This positioning, close to reality but detached from it, is the idealised position of the scientific observer; in field life, the men’s entire everyday embodied this stance.<sup>15</sup>

## **Wananchi – ‘Our Fellow Kenyans’**

Scientific detachment notwithstanding, campaigns got entangled with the trajectories of people living in the field, where DVBD men met their fellow citizens. The DVBD men entered these encounters as ‘government people’: ‘We were the eyes of the government .... Anywhere there was a disease our government sent DVBD people to go and check out that disease, and they would bring a report and then the government would begin to treat people’ (Okonji, 14 December 2004).

And ‘anywhere our government thought of doing something [such as agricultural schemes], our DVBD staff would first go and check that place in terms of the diseases that were there’ (Ogalo, 24 June 2004). DVBD men

were the eyes and arms of government, and they dispensed of the government's knowledge, and not rarely its medicines: 'we always walked with Chloroquine and Aspirin tablets for the villagers' (Okonji, 14 December 2004). And yet the men were also citizens, dependent upon government decisions and resources. They described themselves thus variously as subjects and government agents, and used the term '*wananchi*' (Kiswahili 'citizen') both for themselves and others: 'we told *wananchi* to do ...' or 'what could we small *wananchi* do about ...?'

Characteristic 'middle figures' (Hunt 1999), DVBD men personified the government-citizen bond, and their work drew other people, too, into the middle, thus continuously expanding the scope of government and citizenship. In the field, the men relied – despite camping equipment and mobile laboratories – upon 'local' people, both for food and casual labour, and for legitimation:

First we went to the chief [to] tell him that we want to look for insects that cause diseases ... in [this] area: 'Go and teach people that the mosquito people are coming to work here!' ... He has to announce it to people, and people must agree. So when we go in, they don't disturb us. (Okonji, 24 June 2004)

While there indeed was a chain-of-command from the ministry, via the chief, to 'the people' (*wananchi*), statements like 'people must agree' or, in other conversations, 'there must be unity' should not be misread as mere calls for obedience; they also imply a vision of a whole society and its common good achieved through the work of government. The use of the term 'to teach' is important here as it conveys a sense of learning, which joins DVBD men and villagers in a forward-moving community of modern Kenyans. Talking about a particular ethnic group, which was not represented among the DVBD staff, one man illustrated the link between government and knowledge: 'in those days they hadn't yet entered government. They had not begun learning. They were still backward' (Otiende, 29 March 2001). The men considered the transfer of knowledge to the *wananchi* a corollary of successful scientific health work. Rather than denouncing this off hand as an insidious form of discipline, we should recognise the hopes entailed by this project, which both expanded knowledge and spread it.

Somewhat surprisingly – in view of scholarly fascination with rumour and resistance to colonial medicine (White 2000) – western Kenyan

*wananchi* generally seem to have welcomed the DVBD men and their endeavours. Memories of control campaigns might seem particularly positive from the vantage point of the desolate present, but the elderly villagers' praise of government disease control and their chagrin over its present poor state, and the bewildered silence that often met our prompting for conflicts – 'but there was lots of sickness ... would people who are sick object to medicine?' – suggests that *wananchi* indeed appreciated the work's positive intentions. Blood-stealing rumours did occur and were remembered by the men when we asked, but they seem not to have led to resistance (see White 2000; Geissler 2005). Despite occasional disagreement with villagers about specific methods, labour recruitment, quarantine measures or drug side-effects, mid-century rural western Kenyans, maybe especially after gaining national independence, seemed to have accepted their role of citizens of public health, as members of a national collective guided by science. In this way, fieldwork campaigns extended the scientific project into a political one.

## **Becoming Men of Scientific Government**

Along with fieldwork campaigns and the emergent project of a healthy nation, the DVBD men pursued a personal transformative project: making themselves as modern men of science in a modern nation. This was as much a professional as a private trajectory. Education and learning were central to this, but also mundane aspects of everyday life, and the making of a family.

### ***Becoming Scientific Subjects***

All DVBD men had received above-average schooling – the old men Primary, the young ones Secondary or Tertiary education. The oldest men had been recruited from school into government during the late 1930s:

My father was just a human being. He had nothing. When I left school I was like naked because I had only the school uniform. On the first day a brother of mine took me down to stroll in Kisumu and look for employment. We walked around. ... I first went to the police, but I was too short. From there we went to ... the Provincial Medical Officer. We walked to the hospital and I was taken and he was left. I had luck. That is how I started the work of yellow fever inspector [later DVBD]. I was asked what

class I reached and I said ‘class six’; ‘Did you pass?’; ‘Yes, Sir, I passed’, ‘Then come on Monday and start work.’ (Otiende, 26 February 2001)

Some men had tried other government services or had failed to become soldiers before joining DVBD; for others, DVBD had been the only available opening into the medical field, which they had aspired to, often based upon early encounters with government doctors or with life-threatening illness.

The men did not derive from the top layer of colonial rural life; unlike the progeny of the first Christian converts or of colonial chiefly families, many of their fathers had been pagans and none had been a chief. Indeed, they seemed to have pursued education and science in competition with wealthier Christian children, who from the 1940s onwards began entering clerical work and administration. Their childhood stories were full of hard-



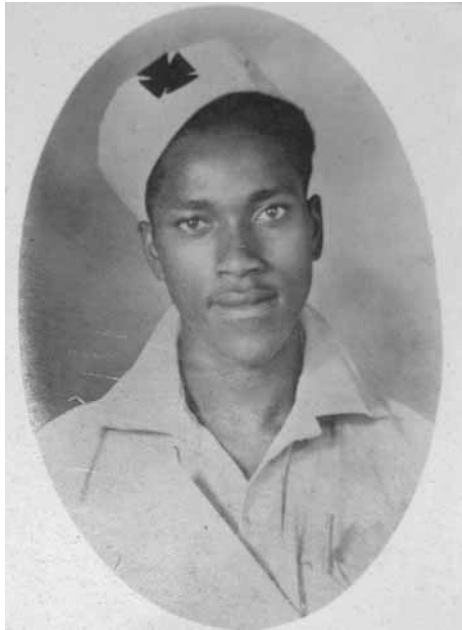
**Figure 12.5:** Portrait with ‘The Mosquitoes of South Sudan’ (author’s photograph).



ship, cattle herding and long walks to school; learning remained their life-long aim; and books were among their valued possessions. One man, in his late eighties, thus asked to be photographed with what I first assumed to be a Bible, but which proved to be a 1939 edition of 'The mosquitoes of South Sudan', bought in instalments after the war (Figure 12.5).

The most important book in the old men's homes was nevertheless the Bible. Many had received baptism in Church schools, and described themselves as 'strong Christians'. Several admitted that they only 'found Christ' late, and had lived life fully as young urban professionals, while others claimed they had led almost monastic lives, dedicated to acquiring knowledge, since their school days. Their commitment to Christianity, science and development – the struggle against insects and superstitions, and for hygiene and salvation, better souls and healthy bodies – was one, as it had been for medical missionaries (see, for example, Fabian 1991: 159); and several of the old men practiced after retirement as preachers, Church elders or medical experts in their villages.

Education and Christianity were linked to self-discipline, and although the old men predictably lamented the youths' lack of it, even younger men



**Figure 12.6:** Portrait of 'Yellow Fever Inspector', 1941 (photographer unknown). (Personal archive John Nguriethi).



Figure 12.7: Portrait with 1982 Uniform and 1970s Land Rover (author's photograph).

claimed this DVBD virtue and praised 'British' punctuality, recalling the early morning parades, as well as dismissals due to minor delays during the early postcolonial period. And young as well as old cherished the uniforms that had been provided up to the early 1980s (Figures 12.6 and 12.7). The praise of self-discipline is common among older Kenyans, but fieldwork adds an edge to it. Exposed to the dangers of a hostile, remote and disease-ridden environment, 'field men', like soldiers, had to be enduring and punctual, fair, meticulous and self-controlled:

We didn't quarrel in the field. Because that was a bush and one could kill the other. The bush is bad. If there was a problem we sat down later. If we found a mistake, people accepted; then we could cook, eat together [...] and that would be the end (Otiende, 26 February 2001).

### *Professional Family*

As this quote underscores, professional self-fashioning was not merely a process of individualisation, but produced new relations: 'at DVBD, we were like a family' (Luoba, 22 November 2005). Across ethnic and kinship

differences people formed friendships within their age-cohort (Figure 12.8).<sup>16</sup> These new forms of brotherhood were intertwined with conventional kinship relations: staff members recruited their kinsmen, others found wives among their colleagues' families or during fieldwork. Kinship remained the men's most important social concern, but professional relations and responsibilities were woven into this idiom.

Crucial among these new relations were ties between older and younger men. Recruitment along kinship lines seems to have been so common that one old man lamented: 'There used to be a rule that one could bring one son [to be employed by DVBD], but these days, they have cheated us on that, too' (Sawe, 24 April 2005). More importantly, 'bench training' by older men (initially, British officers) was a mark of DVBD which even the youngest staff who had achieved academic certificates continued to praise as the source of DVBD men's superior expertise: 'In those days, people who were employed earlier and had been trained would sit down with us and show us [how things are done]. This made us know the work well from [down] there' (Ogalo, 24 June 2004).<sup>17</sup> This metaphor of growth was un-



**Figure 12.8:** Plate with Mixed Photographs of DVBD Colleagues, 1960s and 1970s (photographer unknown) (personal archive, Longinus Pamba).

derlined by a gesture of a tree growing that normally illustrates children's growth; paternal bench training was seen as appropriate means of making younger men grow in a familiar, familial way, within a modern scientific project. 'We guided them' and 'they showed us their ways' were other ways of saying this.

Some DVBD men had descended from older staff, but even without biological ties, the younger generation maintained lasting relations with their elders; decades after the old men's retirement, younger staff knew about their wellbeing and whereabouts, as if they indeed were kinsmen. And whenever an old DVBD man passed away, his colleagues buried him, and until the last Land Rover broke down, the coffin would be taken on its last 'safari' in one of the DVBD vehicles.

When they met, younger staff related to their professional genitors with respect and affection. They introduced them as 'fathers' and praised their achievements: 'he could identify mosquitoes by ear' (Staff Reunion, 12 December 2004). Due to the expanded educational opportunities after independence, generational respect and professional rank were sometimes at odds with each other. Thus, when we visited the home of one of the oldest staff, a former yellow fever inspector and lifelong DVBD man, accompanied by the retired Head of the DVBD – a generation younger, holding a UK doctorate and author on innumerable scientific papers – the



**Figure 12.9:** Urban Housing Estate in Shauri Moyo Kisumu Where DVBD Staff Lived With Their Families in the 1960s (author's photograph).

two men, who were both equally enthusiastic about the encounter, kept exchanging polite and affectionate remarks of praise, such as ‘he is my officer’, ‘he taught me’. A feast was prepared on the occasion of the successful younger man’s visit, but when food was served the older man still washed his hands first. During dinner, the older man inquired about younger DVBD staff whom he had once trained, and was satisfied to learn that many of them had progressed to go abroad; he praised their Head, his ‘son’, for honouring his responsibilities and ‘taking well care of his people’ – much like a grandfather would praise his son for the grandchildren’s educational progress.

The emphasis on parental bonds and intergenerational relations does not mean that all was respect and responsibility. Styles and attitudes of old and young differed (compare Figure 12.1 and 12.9). Among themselves, the old men bickered at times about their sons lacking discipline and ability, and they recalled, much like their erstwhile British officers, their irritation over bellbottom trousers, open shirts, sideburns and ‘Afro-look’ in the 1970s, when khaki uniforms went out of fashion. Meanwhile, the young men mocked their professional fathers’ ‘British’ accent and attire. Intergenerational conflicts were part of this family life. After independence, the old men who took over their colonial officers’ uniforms and privileges also inherited the attendant relationships and potential conflicts, as the 1960s fieldwork photograph of the DVBD’s first Kenyan Field Officer with ‘his men’ illustrates (see Figure 12.3). A particularly noteworthy conflict was about the practice of ‘man-baiting’, catching mosquitoes on the bodies of staff members, which the younger men resented and apparently got rid of after a strike in the 1970s.

## **Modern Kenyans**

The government scientists’ professional kinship created not only bonds across the discontinuities of scientific progress, epidemiological change and political ruptures; it also extended beyond the confines of locality and origin, to embrace the emergent Kenyan nation. Bench training was based on staff rotation between DVBD stations across Kenya, including stays in the laboratories of the Nairobi headquarters. In the 1960s, recruits spent, as part of their increasingly formalised training, periods of time in different stations, studying, under the supervision of local senior staff, the research and control of the diseases common in different parts of Kenya. These movements gave the men opportunities to enjoy life outside the immedi-

ate control of their kin, extended the social bonds between DVBD generations across the nation, and gave the men a shared knowledge of their country: its environments and diseases, its peoples and lifestyles, and its development projects and challenges.

On their travels, they learned not only about microscopy and mosquito dissection but also about city life and about Kenya as a multiethnic nation (and not infrequently the men founded inter-ethnic families). They searched insects among pastoral tribesmen and in the backyards of Indian traders, and lived and worked with people from different parts of Kenya. During these peregrinations their primary attachment remained the capital city to which they regularly returned, before many of them, but not all, got posted in their area of origin. Much like their colleagues from the Kenyan Railways (Grillo 1973), DVBD men formed a truly Kenyan community, joined by their commitment to the lives of citizens and their modern nation.<sup>18</sup>

While staff rotation created a sense of community and of progressive movement, it also contributed to the production of an important separation, alluded to in the discussion of campaigns: that between the men and their field. While the men claimed to be at home anywhere in Kenya, in an important sense they were nowhere at home, because their lifestyle and professional detachment left them somewhere outside; as a then young trainee recalled from the 1960s, when he had learned about Leishmaniasis in the northeast: 'Local people could never pass through the bush by the side of the village where our camp was. They feared we were in that business of blood' (Luoba, 29 September 2005). DVBD men knew the Kenyan nation much in the same way they knew the villages in which they camped: they were right in the middle of it, and yet a little removed, as befits their status as men of science and men of modernity. This detachment from local ties in favour of a national network could be read as an expression of the modern state's (and science's) distanced gaze; alternatively, more in line with the men's self-esteem, one could see it as nascent national citizenship.

### *The Generation of Science*

The large organogram in the DVBD Head's office in Nairobi (Figure 12.11), displaying the entire institution panoptically – each man a cardboard slip in a brass holder, grouped by stations and regions – evokes stereotypes of modern government discipline: abstract, impersonal, hierarchical and static. Yet, if we add the narratives of professional kinship, above – about generational learning, mutual respect and responsibility, lifelong commitment – it begins looking more like a family tree. Not an instantiation of

‘seeing like a state’, a static hierarchical simplification, but a moment in a larger movement through time. The Head himself, who began in one of the slots, moved around, learned and aged, and rose to the top: not the centre point of a bureaucratic order but an ancestor who watches over his continuously growing and developing family.

The role of paternal bonds and respect for the past also qualifies the assumption that the progress of modern science relies on closures and on cutting its ties to the past – through discoveries and innovations – and that modern science thus is inherently presentist. DVBD men were keenly aware of the debts that they had towards older colleagues and situated their knowledge in long-term creative processes. This aspect of generation – making government and creating science – in and through lasting material relations, this role of time and relations in the making of state science, deserves further scrutiny in our reflections about science and government – colonial and otherwise. In order to look at generation from another angle, I will in the last section of this paper turn to the men’s private lives, and the way in which personal projects are intertwined with those of science and government.

## **Making Modern Lives**

The DVBD men usually resided in towns and cities. As they learned about science and contributed to the knowledge and health of the nation, they also transformed their personal lives, accumulating education and modest material wealth, participating in urban life and exploring their country (and in some cases beyond) and, last but not least, raising and educating their families. In the campaigns, with which I began this account, the men set out to transform the non-modern ‘field’ they had left behind; in their lives in town they pursued another facet of the same project: their mental and material self-transformation; in their rural retirement, which I will turn to in the end of the chapter, the two came together.

### ***Coming to Town***

Most men described their early work years, moving between cities and stations, as a time of youthful license. One man, who had been active in the anti-colonial struggle and was still known within DVBD as ‘the freedom fighter’, remembered:

By then I had not known Jesus and I drank! At four after work we used to go to Kibera [in Nairobi] to drink, then we went to a dance hall; we were young and we enjoyed life. We did not think of [getting] a wife. We used to earn little money but things were not expensive, it was enough to buy food and even beer. And then it was still safe in Nairobi to move at night [i.e. before 1950s colonial repression], and it was much fun. (Nguriathi, 10 April 2005)

Not all were so gregarious; some claimed never to have gone out at all, apart from to Church; but all remembered a time of relative affluence. Since the government provided the men with housing, allowances, uniforms and transport, the money they earned: 'would remain. I would not spend it in a month, but bring money to mother. I would even buy a goat and take it home' (Achieng, 17 December 2004).

Only after they had 'done' several diseases, and often in conjunction with their promotion from laboratory attendant to technician and the attendant pay rise, the men married.<sup>19</sup> With few exceptions, even the older men had one wife, unusual for their age group, but maybe more common among, usually Christian, 'government people'. Most of the men belonged to the Anglican Church or Catholic Church; only a few had later joined an evangelical group, but very few had chosen one of the popular 'African' Independent Churches, underscoring their commitment to a modern, global community of faith – akin to universal science – rather than to an explicitly 'African' or 'traditional' identity.

Talking about their marriages, the old men emphasised their wives' rural lives in contrast to their own urban exploits:

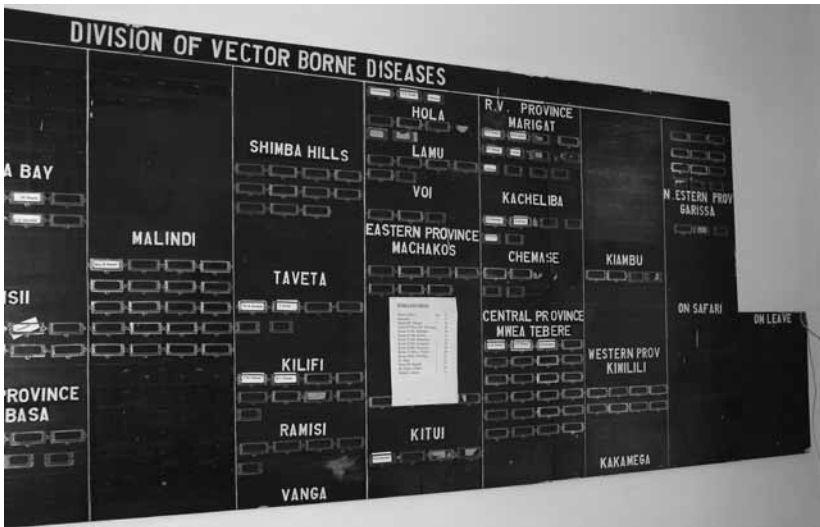
With us, once we are married your father gives you land. When you have been given land, you take your wife and you establish a home with her. When you are going somewhere even to work in Nairobi, you leave your wife there. So you would come to visit her after every end month if there is money and she would just stay there to till the land (Otiende, 26 February 2001).

When we talked to their wives or widows, they claimed by contrast that they had only occasionally gone 'home' to till and look after rural kin, but had lived in the city most of their adult lives, and their styles in terms of dress, furnishing and cooking were urban. However, even though wives shared the men's urban lives and mobility between stations, they never went to the





**Figure 12.10:** Younger DVBD Staff Members, Mid-1970s (photographer unknown) (personal archive, Ambrose Masime).



**Figure 12.11:** Organigram of the Entire DVBD Displayed at the Director's Office, DVBD HQ, Nairobi (author's photograph).

field. Field was a male domain, outside, uncivilised and diametrically opposed to the modern home in the city.<sup>20</sup> Like few other professional groups, the DVBD families lived the gendered distinctions implied by colonial forms of domesticity (e.g. Mutongi 2007); the men's crusade against infection, wilderness and 'backwardness' was complemented by their wives' efforts at producing a stable nuclear family within a modern, 'permanent' house.

Until the 1980s decline, the men (and later their families) were housed, as part of their contract, in government housing, which initially was in the local hospital or the DVBD station, and later on in the housing projects that marked the development of Kenyan cities, especially after independence and up to the 1980s. These houses reflected both in their layout – kitchen, living room, bedroom(s), veranda, front and backyard – and in their organisation in 'estates', named 'Lumumba' or 'Mboya' after progressive African leaders, complete with schools, streetlights, shops and pubs, the modern ways of life that their inhabitants aspired to (Figure 12.8, 12.10). Here, the everyday of government men included forms of social life such as football, dancing and participation in congregational life, as well as drinks after work.<sup>21</sup>



**Figure 12.12:** Group picture of DVBD Staff Families on the Occasion of 1963 Christmas Party (photographer unknown)( personal archive, Alfred Lwoba).

Urban living conditions, in conjunction with lifelong employment, facilitated close social relations among the men and their families (Figure 12.12). At the age of retirement they had known each other for thirty or forty years, had shared youthful city life as well as each others' weddings, witnessed life crises and Christian revivals, had been godparents of each others' children and supported their education and careers. They had seen times of plenty and times of scarcity, and shared the slow decline of government services, from post-independence heights into the present state of abjection. Like the abandoned laboratories in which their younger colleagues today wait for new 'projects', the decaying houses and overgrown streets of Kisumu's estates, where rubbish and high grass harbour mosquitoes and disease, were to the old men evidence of 'things falling apart': during their time, 'mosquito inspections' and rubbish clearings would have prevented such dangers.

## **Propagating Modern Life**

One factor, apart from religion, modern self-image and housing conditions that may have contributed to the low rate of polygamy and to comparatively small families among these men was the emphasis on children's education, another facet of the wider progressive project that the DVBD's scientific work was part of. Most of the men's children had been educated up to Secondary school, and many of the old men's sons had gone on to university, often abroad. Their children's achievements – even if these in many cases led them into other countries – were a source of great satisfaction, and their photographs, in academic attire, holding diplomas, in front of houses and cars, adorned the walls of the old men's living rooms. Often the old men complained about their grandchildren's unemployment and asked us to find them a place in government research. Despite their high educational levels, exceeding their grandfathers and fathers, today's youths have little chance to proceed along the once clear-cut pathways that had led the older men to success (see Whyte and Whyte 1998). Education has little currency on today's labour market, just as scientific knowledge has little impact on the workings of government – it is money not knowledge that rules, as the old men often lamented. In spite of this observation, education remained the men's highest value, and science the standard of education; several of them remarked with chagrin that their grandchildren studied business or law rather than science.

The progress of science and of modern government, of the nation and its citizens, and the growth of the own family in its most elemental sense

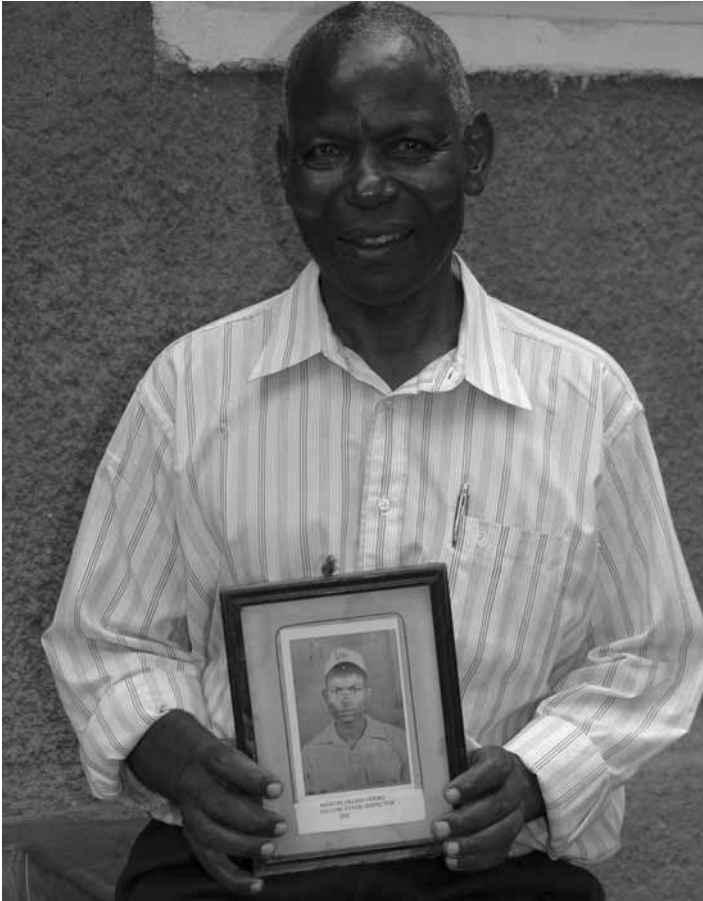
were intertwined tasks for the men, no matter whether they cleared bush and took skin snips, learned about mosquitoes and studied the Bible, invested in cash crops and sent their children to school, went to the Public Service Club for a beer on 'members day' or preached to their fellow Christians on the following Sunday. The totality of this modern project, and the appeal of its irreversible forward drive, rooted in close and lasting social ties and in a commitment to the past, became particularly clear to me when we stayed in the home of one of the oldest men, in the heart of Luoland. I end the account with this visit, a particularly pleasant moment in fieldwork, which provides a suitable counterpoint to the ruined field station with which I began.

## **Looking Down the Hill**

The appropriate starting point for approaching this homestead is the DVBD Kisumu station. In its back is an incongruous little round and grass thatched house built of bricks. It is the last remaining of a series of small experimental houses that in the 1930s had been built throughout the 'African' parts of the city to collect mosquitoes by night. In the 1940s, when the present station had been built around it, it had been given to one of the promising young 'inspectors' and his new wife, who had their first child here. A family from which many Kenyan science workers and doctors would spring was founded in an 'African hut' designed, according to colonial imaginaries, for scientific research, adjacent to a laboratory block. From there, the family moved to different urban estates and DVBD stations, while the household head, Mr O, built, like all DVBD men, a house in his rural 'home'. Eventually, some years after his retirement, the family settled there.

The home, a collection of large modern houses, several kilometres from the tarmac road, that stands out from the surrounding mud and grass homes, is set up as a customary Luo homestead: on top is the modest house of Mr O., built in the 1950s, characteristic for the generation of colonial civil servants, modelled upon the urban bungalow, with a small, mosquito-screened veranda and surrounded by fruit trees. Across the hill slope below this house are the houses of the sons, substantial family homes of absentee owners living in town, growing in size as they descend to the mansion of the youngest son, a senior doctor. Following custom, the houses are positioned according to generation and seniority, ensuring that rainwater will run off 'downwards'; yet they are also connected with electricity lines, water supplies and sewage pipes.

These houses, uninhabited for most of the year, are the only houses with such amenities in the area, and each of them is larger than any other home on the surrounding hillside. Sitting on Mr O's veranda, overlooking his son's roofs, one appreciates the homestead head's sense of achievement. It is a characteristically modern form of paternal pride; it goes beyond the mere satisfaction over one's offspring. It is also an intentional actor's project: this reproductive achievement is self-consciously creating new lives that are different from that of the father, let alone his ancestors' lives; it moves beyond what has been and opens new trajectories, and it still remains part of a shared history. All sons, as well as the daughters – who for customary reasons do not build houses in the father's homestead – have



**Figure 12.13:** Portrait of Mr O. 2004 and 1945 (2004)(author's photograph).

attained the highest qualifications, funded from Mr O's income, and have become urban professionals. Several sons are doctors, following their father in the health field, and fulfilling the father's childhood dream, who when he joined DVBD had been inspired by the capacity of medical professionals. A granddaughter is a successful laboratory scientist – though not with government but with a transnational research collaboration – extending the family heritage. Their home embodies on the level of personal life the larger project discussed above in relation to scientific campaigns, and to the DVBD as an institution. The generation of change, through scientific work and 'being with government', is here intertwined with changing generations. Professional achievements and family success are intertwined sources of pride, which is reflected in the portrait of Mr O, with his photograph as a young man. Between the 1944 studio photograph of Mr O, aged 15, in his Yellow Fever Inspector uniform, shortly after leaving his father's village, and seated above the rural family home sixty years later (Figure 12.13), lies a journey out into the world, a transformational 'safari', in which personal ambitions and the making of a successful family were integral parts of a larger professional modern project.

## Generation

Across professional and private aspects of the DVBD men's life, links across time, bonds of generation, creative, transformative relations between the old and the new are critical. The men's present was envisaged as being on the move, in the rapid transition between the past – as a source of pride, knowledge and achievements – and the future of better lives in a different society. From the vantage point of the men's stories, the scientific government institution, DVBD, appears not as a static, hierarchical structure, made up of vertical connections that link the central state ministry to its farthest outpost across the territory. Instead of being a scientific segment of state bureaucracy, it is a current in a larger movement, a project composed of many, varied individual life courses.<sup>22</sup>

Whyte and Whyte (1998) observed, in relation to Ugandan villagers' life with 'development', that the latter intertwines individual achievements, kinship values and universalist notions of progress. All of these are linked by the terminology of 'growth' (1998: 230–31). For the western Kenyan DVBD men, progress or development are *dongruok*, 'growth', applied equally to science and society, and children's wellbeing and education (see

Prince and Geissler 2010). This notion of growth takes form in the generational and generative ties in the men's work, and in their investments – and their contributions to public health – into their children's better future. Growth in this sense is keenly aware of its origins and of the open horizons that lie ahead. Contrary to the critique of 'high modernism' among some anthropologists, it is emphatically not a radical break with traditions and older relations, nor an imposition of a pre-determined future (see Scott 1998), but an open process, implying possibility and renewal – exemplified both in seeing one's children outgrow oneself, and in making scientific observations beyond what was previously known.

## **Conclusion**

This paper examined the memories of Kenyan government scientists' of my father's generation; together with them I searched for their, or our, lost modern times. I showed how the DVBD men's project – public health, implemented by the nation-state, guided by scientific research – was articulated throughout their professional and personal lives; similar narrative patterns, similar intentionalities or temporalities appeared across different domains and levels of scale. In fieldwork campaigns the DVBD men progressed, through investigations and discoveries, tied in with movements and actions; they transformed knowledge and made new spaces; the 'field' was simultaneously seen in different ways and made different; and this epistemological and governmental effort was seen as part of the making of an emergent collective – eventually, the Kenyan nation. Crucial for this work was the men's own ambiguous identity as both citizens and being with government. This mediating role implied continuous personal transformation and self-improvement; these were men on the move, although their particular direction was never unequivocal. Learning and knowledge were central in this personal quest, which implied a lifelong process of individual education, and generational relations between more and less knowledgeable men. Finally, this personal project extended beyond work into the men's family life, in which the itineraries of learning and improvement permeated the everyday and extended to future generations.

This comprehensive project claims that it is possible to understand the world, and that it can be changed. The two kinds of transformation – of knowledge and of what has been made known – are intertwined: scientific discovery relies upon (field) work in the world, and governmental action upon the world is guided by ever-changing knowledge. Both forms of trans-

formations point forward, one towards truth the other towards the good life, without necessarily aiming for a definite end point. What links disease eradication and domestic life, scientific learning and discovery, public health and child rearing, is this overall notion of forwardness. It is this certainty of direction and movement, which once had engulfed their entire lives, which elderly Kenyans yearn for in their present state of, as they put it, 'being stuck'.

The material leads me to qualify some current anthropological and historiographic engagements with state and medicine that view the state as an entity vis-à-vis its people, and focuses on the controlling and disciplining nature of state science (as in the seminal works of Comaroff (e.g. 1983) or Packard (e.g. 1989)). Progressive narratives about welfare or equality, health or nation-building appear in such accounts as mere underpinnings of an apparatus of power, 'grand narratives' that legitimise domination; colonial medicine and public health have been used to underpin this argument (e.g. Hoppe 1997). Worse still, these narratives' lack of fulfilment that often can be demonstrated retrospectively prove according to such analyses their deceptiveness (and, implicitly, the impossibility of intentional societal change). While such critique of governmental power and of science has been valuable to debunk older narratives of quasi-natural progress in terms of inevitable 'discovery' and linear 'modernisation', the DVBD men's lives put into question the taken-for-granted duality of state and people, science and subjects; the men's stories about negotiating the 'field' between these supposedly separate entities suggest that we should approach state/government and science/medicine not only as dispositives applied to people in a subject-object relation but always also as projects endorsed by them. These projects call up a collective whole, a sense of 'society' – in the terminology of their time, the nation, 'Kenya' – that comprises people and state, science and scientists and their subjects and gives them a direction in time.

The imaginaries of people versus state, or science versus subjects, erect a spatial construct of sorts, an order of power, held together by the polarity of domination and resistance; this emphasis on structure – which is only reified by contrasting it with 'resistance' or 'agency' – tends to neglect or even belittle the distinct temporality that always also shapes modern government and science – as the DVBD men showed throughout their lives. This sense of progressive time, of human-made changes, within which government and science are efforts to know and transform society, is more central to the project of enlightenment than the rendering as 'high modernism' allows us to see; faced with the timeless, yet violent, presentism of the current world order, it might be time to get it back into focus. It is nei-



ther mere ideology, deflecting from the brutal reality of power nor can it be measured, and rejected, against the yardstick of fulfilment, as the sober post-hoc analyses of 'failed' state welfare projects claim. Rather than a disguise of domination, or a blueprint that continuously fails its realisation, this project is a vector of intentionality, a notion of forwardness; a longing, a desire.

Talking to the old men it often seemed to me that they still held more of this desire – for truth and for the possibility of change, for unknowable horizons and forward movement – than I, two generations their junior, could muster. Their lives and itineraries are different from mine; they belong to the past; yet, their sense of direction inspires me, stuck in a present in which, indeed, structures of domination seem to obscure our sense of possibility.

## Notes

1. I am grateful to the DVBD's hospitality and support. Thanks to Philister Madiaga who actively participated in the interview work, and transcribed many of them in an empty laboratory, which the DVBD had availed to us. I am grateful to Professor John Ouma and Dr Eric Muchiri, respectively previous and present Heads of the Division for their encouragement; and to Dr Alfred Luoba, late head of the Kisumu Branch, who participated in the fieldwork and continuously inspired the project. Drs Kenneth Ombongi of Nairobi University, and Maureen Malowany, McGill University, participated in this collaborative project and prepared publications on different aspects of it. We received valuable advice on all stages of the project from Professor Virginia Berridge. The idea for this research project was developed, and the earliest interviews conducted together with Dr Ruth Prince. The larger study of medical research around Kisumu, which this material is part of, are funded by Wellcome Trust, Leverhulme Trust and British Institute in East Africa.
2. While the DVBD Kisumu employed in its heyday about fifty people, KEMRI Kisumu employed in 2008 more than 1000 people to run overseas-funded clinical trials.
3. With the exception of two secretaries, the DVBD consisted of men.
4. This work is part of an ethnographic study of medical research in western Kenya, based in the research group Anthropologies and Histories of African Biosciences (<http://aab.lshtm.ac.uk>) at the London School of Hygiene.
5. Failed states are not 'capable of carrying out functions that they themselves claim and that they are reasonably expected by their populations to carry out' (Nodia 2002).
6. The relativist counterclaim that the state in Africa still 'works', just not as we expect it to, is equally unsatisfying as the normative 'failing state' argument (see Chabal and Daloz 1999).
7. Here and below I quote the informants with their own names, as all of them had requested when interviewed.

8. Kala Azar and sand-flies were found in arid areas, Bilharzia and snails, and malaria and mosquitoes in humid lowlands and so on. The men associated every DVBD station with specific diseases and campaigns.
9. The endemic diseases river blindness and bilharzia were thus described as 'outbreaks', when economic interests (labour recruitment and irrigation schemes, respectively) and new technologies (DDT and molluscicides, respectively) turned them into a focus of campaigns: 'Bilharzia broke out. We took some people to go and do it' (Okonji, 14 December 2004). Diseases that had been common for long appeared to staff (and villagers) as new diseases, because the research created them as named entities and targets of action; even diseases that did not actually exist in the colony but were international concerns – notably yellow fever – could in this way orientate DVBD's work and the men's professional identity (as Yellow Fever Inspectors, see below).
10. The epitome of such innovation was DDT, which after its first Kenyan trials was employed for spraying bush and houses and dousing rivers and ponds against insect-borne infections; the invention of other insecticides and molluscicides, and new applications, such as insect traps or aerial spraying, and of new chemotherapies generated continuously new disease foci and new campaigns.
11. Even new public health concerns, less determined by chemistry than by social science, such as 'environmental management', 'gender sensitisation', were inserted into the established pattern of campaigns: 'doing x'.
12. Even the two DVBD activities that did not involve a distinct 'field' and had no clear beginning and end – urban malaria control (searching and destroying mosquito breeding sites) and yellow fever control (spraying ships, trains and aeroplanes that entered the colony) – relied on the same logic of territorial threat and conquest as 'campaigns'; one maintained and expanded clean urban spaces in contrast to disease-ridden bush (designated as 'reserve' of traditions and pathogens); the other defended the borders, overlaying political demarcations with epidemiological ones.
13. DVBD fieldwork practices marked this separation. Thus, DVBD staff camped in their government tents within villages, and even within the popular areas of Kisumu they operated from specially constructed round tin huts, where they slept to night-catch mosquitoes. Staying in ordinary houses or living with local people would presumably have compromised the purity of their scientific and governmental position.
14. Mosquitoes, which the men presumably encountered every night, were in the context of fieldwork construed as threat that had to be countered by nets and insect repellent, underscoring the way the men re-made themselves and their environment as 'fieldworkers'.
15. Tents also marked social differences within the camp, notably that between officers' tents with floorboards, furniture and veranda, and the men's communal tents, and continued these after independence.
16. Their lasting bonds of friendship became particularly evident at the funerals, where DVBD colleagues featured prominently and at times overshadowed the deceased's brothers.

17. The oldest DVBD men were initially employed as 'yellow fever inspectors' and subsequently became laboratory attendants or boys, then entomological laboratory assistants and, after further training, since the late 1940s laboratory technicians and senior technicians. Only after independence could they, through formal training, achieve the rank of laboratory technologist and (scientific) officer.
18. This trans-ethnic community was put on trial during the anti-Mau Mau counterinsurgency, and during postcolonial ethnic clashes. Although the few Kikuyu-speaking DVBD men that had participated in the struggle said they had not been able to discuss politics at work, none of those we interviewed suggested that colleagues had reported on them (on the contrary, they told about support from non-Kikuyu men). And none of the men spoke about involvements in ethnic clashes, apart from stories in which DVBD staff had protected each other irrespective of tribe. In one case, a man and his family was housed for a long time in the DVBD premises because he, as a non-Luo, had been at risk during ethno-political conflicts.
19. For the oldest men, the general strike of 1947 brought welcome assistance, since: 'after that strike we got forty shillings, and that was enough for me – I married ... I bought cows from that money' (Okonji, 24 June 2004).
20. The men shared this view with their officers who disapproved of the idea of staff wives in the field, although some of them did go to the field with their own wives.
21. Beer consumption illustrates the men's struggles for their share of modernity: in colonial times bottled beer was not encouraged among Africans, who accordingly yearned for it; beer halls became the social joint after freedom was attained. This struggle about beer turned around in the 1980s, when President Moi abolished traditional beer brewing; now the men, due to their diminishing salaries and their old age, yearned for the neighbourhood beer parties they had had as young men.
22. The centrality of growth and generation, especially relations between men of different procreative generations, could be said to reflect something typically 'African' – just as some believe state patrimonialism and paternalism to be rooted in African kinship and sociality. A better approach would examine the links between the creativity and generationality of science, state and kinship not as African idiosyncrasies but as a universal, often neglected aspect of modern science and government.

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