

Striving for Excellence
—— at the Margins ——
*Science, Decolonization, and the History of
the Swiss Tropical and Public Health Institute
(Swiss TPH) in (post-) colonial Africa,
1943 — 2000*

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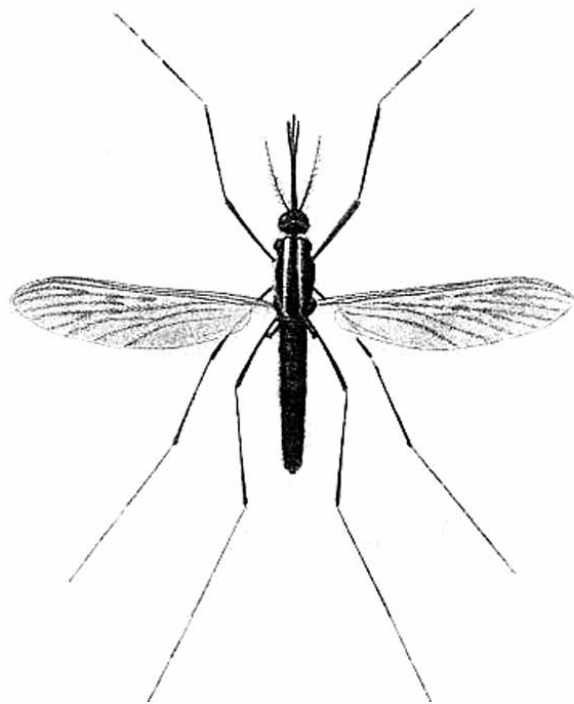


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*History isn't the lies of the victors, as I once glibly assured Old Joe Hunt;
I know that now.
It's more the memories of the survivors, most of whom are neither victorious nor defeated*
Julian Barnes, The Sense of an Ending

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It was in 2009 and shortly before my first departure to Tanzania when I again made a short visit to the offices of the SWISS TROPICAL INSTITUTE in Basel. As it turned out, this visit had some serious consequences because the institute's director, Marcel Tanner, asked me to transport a suitcase from Basel to the laboratory of Ifakara in rural Tanzania. For many hours of the journey I found myself musing about the contents of this black box which travelled alongside my personal items and even without knowing it, I had the dim sensation that this unwieldy passenger which I put into circulation propelled my journey out of the ordinary and rendered it more meaningful than would probably have been without it. Much later, I learned that the unhandy luggage was a CD4 cell count machine to assist the staff of the HIV/AIDS clinic in Ifakara for a more sound diagnosis of HIV. The major protagonist of this short episode is this powerful piece of technology that proved to be vital for facilitating my entry into the "field" and for bringing me together with people and institutions without which the present study could not have been written. Apart from Marcel Tanner, who initiated and supported the project throughout the years and the staff of the Swiss TPH, I do thank the R. GEIGY STIFTUNG (Basel), the FREIWILLIGE AKADEMISCHE GESELLSCHAFT (FAG), the COMMISSION FOR RESEARCH PARTNERSHIP WITH DEVELOPING COUNTRIES (KFPE), the DR. H. A. VÖGELIN-BIENZ-STIFTUNG (Staatsarchiv Basel-Stadt) and the JOSEF UND OLGA TOMCSIK-STIFTUNG (Basel) for their generous financial support. In Tanzania, I thank the COMMISSION FOR SCIENCE AND TECHNOLOGY (COSTECH) for research approval as well as Frederick Kaijage and Bertram Mapunda (Department of History, University of Dar es Salaam) for their hospitality. A special thanks goes to the staff of the IFAKARA HEALTH INSTITUTE (IHI) in Dar es Salaam, Ifakara and Mtwara who did everything possible to facilitate research at the different field-sites in Tanzania. Likewise, in Côte d'Ivoire, I am indebted to the MINISTÈRE DE L'ENSEIGNEMENT SUPÉRIEUR ET DE LA RECHERCHE SCIENTIFIQUE (Direction Générale de la Recherche Scientifique et de l'Innovation Technologique) and the staff of the CENTRE SUISSE DE RECHERCHES SCIENTIFIQUES (CSRS) for all their generous support. In Switzerland, the study profited from the inputs of my two thesis supervisors, Martin Lengwiler and Patrick Harries, who carefully guided me over the years. Invaluable support came from Rolf Wilhelm, Christine Walliser and the members of the advisory board Howard Phillips, Catherine Burns, Julie Parle, Vanessa Noble, Harriet Deacon, Lizy Hall, Helen Sweet, Anne Digby, Shula Marks, Walter Bruchhausen, Brigit Obrist, Piet van Eeuwijk, Elisio Macamo, Paul Jenkins, Socrates Litsios, Hines Mabika and Jean-Paul Bado. The intellectual generosity of all those who commented on draft chapters of the manuscript cannot be overestimated. Apart from my working colleagues Marcel Dreier, Pascal Schmid, Rita Kesselring and Nanina Guyer, this applies to Marcel Tanner, Thierry Freyvogel, Kurt Schopfer, André Aeschlimann and Bernhard Schär. Sincere thanks are also due to Tony Clarke who in uncountable hours smoothed out any English language issues. My deepest gratitude goes to Anna Schorner who has been assisting and supporting me for several years.

INTRODUCTION

Science, Medicine, and Decolonization

Day by day, Philipp Yacé, secretary general of the PARTI DÉMOCRATIQUE DE CÔTE D'IVOIRE (PDCI) and president of the National Assembly would enter his office, sit on his office desk, turn his mind to Ivoirian politics and his back on a world map hanging on the wall behind his desk. The map never made it into schoolbooks. It offered a different, albeit imaginary, vision of COLD WAR politics. Seen from the North Pole, it showed Europe – constrained between the two superpowers USA and the Soviet Union – peculiarly merging with the African continent and thus subverting the common picture of a world divided in two. One day, Yacé would turn his head to the map and his back on Swiss vice-consul Eugen Wimmer and declare: *“If Europe and Africa could really shake hands then the world’s equilibrium would funnily be reestablished.”*¹

The second image reveals a completely different setting. It shows a scientific field-station set up by scientists from the SWISS TROPICAL INSTITUTE (STI) in a completely rural environment probably close to the town of Ifakara in Tanzania’s rural Kilombero district sometime in the 1960s. The field-station has been constructed tentatively. It consists of no more than four wooden sticks and a rag offering some shade from the burning sun. Under this shelter a European women sits on a folding camp chair in front of a wooden desk. Her hair is combed back in order to not allow single strands of hair disturb her gazing through a microscope and analyzing what is commonly not visible to the naked eye. This scene of contemplation is contrasted by a crowd of young Africans besieging the desk. Many of them hold white sheets of paper in their hands, others are busy writing remarks into black notebooks. The faces of those closer to the field-lab show signs of tension and eagerness as if they could hardly wait for the secrets the microscope has to disclose. The caption to the

1 FONDS ANDRÉ AESCHLIMANN (FAA), Correspondance Côte d’Ivoire 1959–1962, André Aeschlimann, 10.07.1960, pp. 1–2, here: pp. 1–2.



Studenten bei einer Felderhebung über die Bilharziose-Wurmkrankheit: Die "zweite Generation" verkörpert gewissermassen die Entwicklung des Landes, source: Swiss Tropical and Public Health Institute (SWISS TPH).

picture reveals that, in the eyes of the photographer, the main protagonist is not the European researcher but the African students. It states: "*students during a bilharzia (schistosomiasis) survey. The 'second generation' virtually epitomizes the development of the country.*"

Yacé's map talks about geography. It cunningly turns global power-relations upside down and invites one to hypothesize about the prospect of integrating Africa into world affairs and of "*provincializing*" Europe in turn.² The picture of the field-station talks about practicing science in the field, the power-relations between Western researchers and African students and more generally about science being a strong metaphor for "*development*" and "*progress*" and a means for social upward mobility. The imagery provided by the two examples are direct entry points into the present history of Swiss science in Africa. Both sources are drawn from the repositories of the CENTRE SUISSE DE RECHERCHES SCIENTIFIQUES (CSRS) in Côte d'Ivoire and the SWISS TROPICAL INSTITUTE FIELD LABORATORY (STIFL) in Tanzania, which were both built as Swiss research laboratories in the 1950s and thus at a time when relations between African colonies and the major imperial powers were about to change.

2 Dipesh Chakrabarty, *Provincializing Europe. Postcolonial Thought and Historical Difference*, Princeton 2000.

In the following pages, I will profit from the insights provided by micro-history and use the history of the CSRS and the STIFL as a lens through which the role of Switzerland in general and Swiss science in particular relate to the political and cultural processes of African decolonization. The major argument is that science and decolonization are not only closely tied together but that they are co-producing each other.³ The terms “*decolonization*” and “*science*” have many connotations and it will be necessary to clearly define what they mean when invoked throughout the study.

Firstly, I use the term “*decolonization*” in the probably most conventional way, hinting at a historical process roughly covering the period from the 1930 to the wave of independence which many African countries were drawn into at the end of the 1950s and the beginning of the 1960s. This process can neither be understood as the result of nationalist struggle nor as a deliberate “*transfer of power*” from the colonial “*masters*” to the former colonial “*subjects*” and controlled by the former. As recent scholarship has hinted at, decolonization was fraught with contingencies and its outcome could never be taken for granted.⁴ The period under discussion coincides with major advances in the sciences as well as with the development of an international health regime that had its roots in the 19th and early 20th centuries and which culminated in the foundation of the WHO in 1948.⁵ Emblematic for the scientific achievements was the sulphonamide “*penicillin*” which, in the 1940s, revolutionized the treatment of various infections, many of which had been lethal before.⁶ Also, a great deal in fostering the faith in scientific progress was contributed by the insecticide DDT, which proved to be a decisive weapon during war, especially in the malaria-infested areas and which revolutionized agricultural and public health sectors in what later came to be called the “*Third World*.” Applied widely, the new scientific achievements played an important role within the larger context of empire. Indeed, WORLD WAR II contributed considerably towards reframing the relationship between the imperial powers and the populations living in the colonies but without allowing the concept of empire to falter. To the contrary, the idea of empire reached a high tide after the war, sustained by the conviction that colonial subjects should also profit from scientific progress and social welfare,

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- 3 Guillaume Lachenal, *Biomédecine et décolonisation au Cameroun, 1944–1994. Technologies, figures et institutions médicales à l'épreuve*. Thèse de doctorat, Université Paris 7 – Denis Diderot, Paris 2006, p. 15.
- 4 Tony Chafer, *The End of Empire in French West Africa. France's Successful Decolonization?*, Oxford 2002, p. 5, Frederick Cooper, *Decolonization and African Society. The Labor Question in French and British Africa*, Cambridge 2005, p. 8.
- 5 Theodore M. Brown, Marcos Cueto, Elizabeth Fee, *The World Health Organization and the Transition from “International” to “Global” Public Health*, in: *American Journal of Public Health*, Vol. 96, No. 1, 2006, pp. 62–72, Milton I. Roemer, *Internationalism in Medicine and Public Health*, in: William F. Bynum and Roy Porter (eds.), *Companion Encyclopedia of the History of Medicine*, Vol. 2, 1993, pp. 1417–1435, Paul Weindling (ed.), *International Health Organizations and Movements, 1918–1939*, Cambridge 1995.
- 6 Mark Harrison, *Disease and the Modern World. 1500 to the Present Day*, Cambridge 2004, p. 168.

which gained ground in the post-war European societies.⁷ “*Postwar imperialism*”, historian Frederick Cooper therefore concluded, “*was the imperialism of knowledge.*”⁸ As it will be shown later, Switzerland had a stake in the scientific re-colonization of Africa in the 1940s. The period after WORLD WAR II not only witnessed the attempts to create a federal scientific system but saw the rise of scientific institutions such as the STI and its increasing network in East and West Africa.

Secondly, decolonization impinges on a phenomenon for which scientific knowledge was essential: development.⁹ Though largely seen as a historical formation today, the notion of “*development*” is not used here to single out a specific Western way of thinking and acting, typical for a historical period, but to study the nature, the quality and the shifting intensities of “*entanglements*” between the various actors in the development project.¹⁰ Development did not “*emerge*” at the end of the 1940s. Already in the interwar period, colonial governments became attracted by the promises of development and modernity to such an extent that they more systematically intervened in African societies, with the ultimate aim of increasing agricultural yields or sustaining a healthy work force.¹¹ These efforts saw the rise of many “*experts*” who as a social group offered their advice to colonial and postcolonial governments.¹²

Development rhetoric continued to flourish in the new world order after the war. Famously in his “*four point program*” of 1949, America’s president Harry S. Truman claimed that by means of technical assistance (and with the help of democracy and capitalism one might add) offered by industrial nations, impoverished countries of the “*Third World*” could be brought back on the welfare trail. Seen through the president’s eyes, winning the “*hearts and minds*” of the wretched was possible through the systematic application of science

7 Andreas Eckert, *Regulating the Social. Social Security, Social Welfare, and the State in Late Colonial Tanzania*, in: *Journal of African History*, Vol. 45, 2004, pp. 467–489.

8 Cooper, *Modernizing Bureaucrats, Backward Africans, and the Development Concept*, in: Frederick Cooper and Randall Packard (eds.), *International Development and the Social Sciences. Essays on the History and Politics of Knowledge*, Berkeley 1997, pp. 64–92, here: p. 64.

9 Eckert, *Kolonialismus*, Frankfurt am Main 2006, p. 90.

10 Hubertus Büschel, Daniel Speich, *Einleitung – Konjunkturen, Probleme und Perspektiven der Globalgeschichte von Entwicklungszusammenarbeit*, in: Büschel and Speich (eds.), *Entwicklungswelten. Globalgeschichte der Entwicklungszusammenarbeit*, Frankfurt am Main 2009, pp. 7–29, here: p. 20.

11 Christophe Bonneuil, *Development as Experiment. Science and State Building in Late Colonial and Postcolonial Africa, 1930–1970*, in: Roy MacLeod (ed.), *Nature and Empire. Science and the Colonial Enterprise*, Chicago 2001, pp. 258–281, here: p. 259.

12 Joseph Morgan Hodge, *Triumph of the Expert. Agrarian Doctrines of Development and the Legacies of British Colonialism*, Athens 2007.

and technology in underdeveloped territories. The faith in scientific reason as a means to overcoming painstaking poverty brought together European and African governments, as well as international organizations such as the UN or the FOOD AND AGRICULTURAL ORGANIZATION (FAO). Often, their initiatives went with the hope of containing the spread of communist ideology in the Third World. Moreover, development became the structural principle on the basis of which policy decisions were taken and which channeled the flow of donor money. That development was not the privilege of former colonial countries but became the postcolonial question par excellence is shown by the example of countries such as Switzerland who, from the early 1960s, embraced development as a foreign policy strategy. Swiss government initiatives in this area had largely to rely on the knowledge and expertise of private actors such as the mission societies, the pharmaceutical companies, or groups of natural scientists whose opinion was credited explicitly because they could exhibit practical work experience in Third World countries. Scientists from the STI for instance not only shaped government development policies in the health sector to a considerable degree, their understanding of which path to development to take or which concrete project to embark on differed more and more from the increasingly professionalized government agencies. More importantly, development neither described a mere transfer of technology from the West to African countries nor was it an “*extremely efficient apparatus for producing knowledge about, and the exercise of power over, the Third World.*”¹³ As we will see later, on the one hand, development became a powerful “*claim-making instrument*” for Tanzanian actors, who were very much able to influence the path to development the field laboratory took during the 1960s and 1970s. On the other hand, Swiss development experts became fierce mouthpieces of Nyerere’s African socialism in turn.¹⁴ Thus, looking from within the complex interactions that have taken place on the “*African ground*”, there is not much left of the favored interpretation of development being a powerful weapon against communist ideology gaining a foothold in Africa. Rather, historical actors could or could not cannibalize COLD WAR ideologies according to their various interests.

13 Arturo Escobar, *Encountering Development. The Making and Unmaking of the Third World*, Princeton 1995, p. 9, for a similar view see another classic in the field of development literature, Wolfgang Sachs (ed.), *The Development Dictionary. A Guide to Knowledge as Power*, London 1992.

14 Cooper, *Writing the History of Development*, in: *Journal of Modern European History*, Vol. 8, No. 1, 2010, pp. 5–23, here: p. 11.

Thirdly, “*decolonization*” is used more as an analytical concept throughout the thesis. Compared to many scientific institutions built up by former imperial powers, Switzerland still today exerts a strong influence over the CSRS and the STIFL, which has considerably increased their scientific performance during the last twenty years. The roots of the two institutions’ stronger impact in the scientific and medical realm in the respective countries date back to the period of structural adjustment in the 1980s, when Swiss science and medical research underwent a process of “*decolonization*.” It was at this time, when the two institutions were more deeply integrated into the scientific and medical systems of Côte d’Ivoire and Tanzania, when increasing numbers of African researchers were assigned to the institutes and when research activities were adjusted to local and national priorities. Decolonizing Swiss science did not mean making oneself dispensable. Rather, the process refers to the strategies employed to remain on the spot, to delegate decision-making to Tanzanian and Ivoirian “*stakeholders*” and to position oneself within a constellation called “*research partnership*” today. The strong role played by Swiss science in those two countries was defended on the grounds that the distorted socio-political environment since the 1980s, and the financial constraints imposed on African governments, threatened the high quality standards set for the scientific venture. It would be misleading though to see these mechanisms as neo-colonialism or neo-paternalism only. During the course of the 1980s and 1990s, Swiss science in Africa was shaped by African actors and institutions as much as they had to follow the vagaries of an international research and donor community. The question of how power-relations were reshuffled between Swiss and African actors yields different answers, depending on whether one turns his or her attention to inner-institutional developments, to specific experimental situations or to the interplay between various actors within global scientific networks. Viewed like this, decolonization then becomes more of a lens that allows one to scrutinize the reconfigurations of social hierarchies or the micro-politics of science as practiced in specific constellations.¹⁵

Thus, the thesis argues that a *longue durée* perspective on the history of Swiss science and development in Africa offers novel forms of explaining Switzerland’s role in a postcolonial world order. By taking up the history of science more particularly, it will be shown that science was not just a mere trump card in the hands of the West to exert power over colonial and postcolonial “*subjects*”. Science was not “*imposed*” from above but shaped locally and developed into a highly successful system of communication to which Africans and Europeans adhered to similar degrees. Unpacking the history of the STI and the two mentioned laboratories, the thesis stands at the crossroads between the history of science and biomedicine and the history of development in Africa.

15 Gabrielle Hecht, Rupture-Talk in the Nuclear Age. Conjugating Colonial Power in Africa, in: *Social Studies of Science*, Vol. 32, No. 5–6, 2002, pp. 691–727.

HISTORIOGRAPHIC LANDSCAPE

SCIENCE AND BIOMEDICINE IN AFRICA

The historiography of biomedicine and science in Africa has long been dominated by two contrasting narratives. The first one is the emancipatory tale of the benign influence of science and medicine in the colonies. In this interpretation, medical practices were considered the backbone of the “civilizing mission” inspired by the West’s moral obligation to “uplift” colonial people, and to reduce the blatant disparities between Western “civilization” and “less sophisticated” forms of living.¹⁶ Notorious for this romanticizing view of Western biomedicine in Africa and elsewhere were the many hagiographic biographies or autobiographies of white-coated tropical doctors altruistically roaming foreign lands, dispensing medicine here, suturing gashes there, indeed constantly caring for the disenfranchised.¹⁷ During the 1970s and 1980s, however, this triumphalist vision of colonial medicine veered away in order to make room for an understanding of biomedicine not as a benevolent expression of an otherwise political and cultural project of domination but as a vital “tool” through which the hegemonic project was sustained.¹⁸

Turning their attention to the variety of medical practices in the colonies, many historians claimed that medicine was colonial for its strong preference for certain topics such as race and eugenics; for it focused on the bodies of the Europeans (read the military) rather than

16 Alice L. Conklin, *A Mission to Civilize. The Republican Idea of Empire in France and West Africa, 1895–1930*, Stanford 1997.

17 Megan Vaughan, *Curing their Ills. Colonial Power and African Illness*, Stanford 1991, see especially chapter 7, Stacey Langwick, *Geographies of Medicine. Interrogating the Boundary between “Traditional” and “Modern” Medicine in Colonial Tanganyika*, in: Tracy J. Luedke and Harry G. West (eds.), *Borders and Healers. Brokering Therapeutic Resources in Southwest Africa*, Bloomington, Indianapolis 2006, pp. 143–165.

18 Daniel R. Headrick, *The Tools of Empire. Technology and European Imperialism in the Nineteenth Century*, New York 1981.

on the colonized, and consequently on urban centers rather than the rural countryside.¹⁹ In its most intrusive forms, colonial science and medicine provided the basis for segregationist policies in the urban centers or transformed the colonies into veritable laboratories, where new practices and technologies could be tested before being applied at home.²⁰ In deconstructing colonial medicine, the historiography of health and disease became more “African” and more “historical” at the same time. More African because it unraveled the individual responses to various ailments, the selection of different therapies or the influence of the wider kin group, and more “historical” because the underlying factors determining human wellbeing were no longer seen in a static “hostile environment” but in the interrelation between pathogens, politics and the ecology.²¹ The critique of those employing a political-ecology approach to health was not necessarily limited to colonialism as a specific configuration in time. Rather, they interpreted the poor state of health in Africa as the result of disruptive economic changes such as industrialization, rural depopulation and social costs of production. Writing on health issues in Tanzania, Meredith Turshen, for instance, claimed that far from being homegrown, the country’s current health problems are “a product of colonial history, present dependence, and changed social relations of production.”²² Less inspired by larger topics of industrialization, structural changes and Western dominance, but by what came to be called the “cultural turn” in recent historiography, important pieces of work explored the broader spectrum of medical practices in Africa and the meanings given by Africans to a variety of human experiences including birth and death,

19 Shula Marks, What is Colonial about Colonial Medicine? And What has Happened to Imperialism and Health?, in: *Social History and Medicine*, Vol. 10, No. 2, 1997, pp. 205–219, here: p. 211, David Arnold, *Medicine and Colonialism*, in: William F. Bynum and Roy Porter (eds.), *Companion Encyclopedia of the History of Medicine*, Vol. 2, London, New York 1993, pp. 1393–1416, here: p. 1398, Patricia M. E. Lorcin, *Imperialism, Colonial Identity, and Race in Algeria, 1830–1870. The Role of the French Medical Corps*, in: *Isis*, Vol. 90, No. 4, 1999, pp. 653–679, Meredith Turshen, *The Impact of Colonialism on Health and Health Services in Tanzania*, in: *International Journal of Health Services*, Vol. 7, No. 1, 1977, pp. 7–35.

20 Maynard W. Swanson, *The Sanitation Syndrome. Bubonic Plague and Urban Native Policy in the Cape Colony, 1900–1909*, in: *Journal of African History*, Vol. 18, No. 3, 1977, pp. 387–410, for critical accounts of the “laboratory-metaphor” see: Dirk van Laak, *Kolonien as “Laboratorien der Moderne?”*, in: Sebastian Conrad and Jürgen Osterhammel (eds.), *Das Kaiserreich transnational. Deutschland in der Welt, 1871–1914*, Göttingen 2004, pp. 257–279, Lachenal, *Le médecin qui voulut être roi. Médecine coloniale et utopie au Cameroun*, in: *Annales HSS*, Vol. 1, 2010, pp. 121–156.

21 John Janzen, *The Quest for Therapy in Lower Zaire*, Berkeley 1978, Randall Packard, *White Plague, Black Labor. Tuberculosis and the Political Economy of Health and Disease in South Africa*, Berkeley 1989, John Ford, *The Role of the Trypanosomiases in African Ecology. A Study of the Tsetse Fly problem*, Oxford 1971, Steven Feierman, *Struggles for Control. The Social Roots of Health and Healing in Modern Africa*, in: *African Studies Review*, Vol. 28, No. 2–3, 1985, pp. 73–147, Steven Feierman, John Janzen (eds.), *The Social Basis of Health and Healing in Africa*, Berkeley 1992, for an enthusiastic appraisal of the political-economy approach see: Gwin Prins, *But What Was the Disease? The Present State of Health and Healing in African Studies*, in: *Past and Present*, Vol. 124, 1989, pp. 159–179, here: p. 172.

22 Turshen, *The Political Ecology of Disease in Tanzania*, New Brunswick, N. J. 1984, p. 5.

well-being and suffering.²³ Very innovatively, Luise White read the stories about vampires and blood-sucking which were orally transmitted all over East Africa as a “genre” in which the violent nature of the encounter between Western biomedicine and the African population was rendered meaningful.²⁴ More recent approaches dissolved the boundary between “traditional medicine” and “biomedicine”, showing that healers in Africa not only played different and ambivalent roles according to various interests and expectations but that “modern and traditional knowledge are co-produced” in more general terms.²⁵

The history of science in Africa, too, is familiar with the historiographic shifts described above. Historians such as Michael Adas were pioneers in employing a more critical view of the role played by science in the colonial project. In his masterpiece “*Machines and the Measure of Men*”, Adas insisted that scientific achievement such as blunderbusses, steamers and chronometers were not just simple academic exercises but “[...] sources of both Western dominance over African and Asian peoples, male and female, and of males over females in European and American societies.”²⁶ However, the history of science in Africa wasted considerable amounts of ink and paper challenging two intellectual traditions that proved to be highly influential and highly tenacious throughout. The first was the view offered by George Basalla that the history of science in Africa is synonymous with a unilateral spread of science and technology from the Western centers to the African peripheries slowly drawing the continent into the modernizing project.²⁷ According to this teleological stance, science remains a stable and powerful entity, neither affected by the “transfer” from the centers to the world’s edges nor reshaped whilst being practiced abroad. The second tradition the history of science in Africa had to grapple with was the “laboratory studies”, which emerged as an important branch of SCIENCE AND TECHNOLOGY STUDIES (STS) during the 1980s. Scholars such as Bruno Latour, in the French speaking context, or Karin Knorr Cetina, in the German speaking

23 Nancy Rose Hunt, *A Colonial Lexicon. Of Birth Ritual, Medicalization, and Mobility in the Congo*, Durham, London 1999, Vaughan, *Curing their Ills*, Lyn Schumaker, *History of Medicine in Sub-Saharan Africa*, in: Mark Jackson (ed.), *The History of Medicine*, Oxford 2011, pp. 266–283, here: p. 267.

24 Luise White, *Speaking With Vampires. Rumor and History in Colonial Africa*, Berkeley, Los Angeles, London 2000.

25 Langwick, *Bodies, Politics, and African Healing. The Matter of Maladies in Tanzania*, Bloomington, Indianapolis 2011, p. 17, Langwick, *Devils, Parasites, and Fierce Needles. Healing and the Politics of Translation in Southern Tanzania*, in: *Science, Technology and Human Values*, Vol. 32, No. 1, 2007, pp. 88–117, Walter Bruchhausen, *Medizin zwischen den Welten. Geschichte und Gegenwart des medizinischen Pluralismus im südöstlichen Tansania*, Bonn 2006, Bruchhausen, *Medical Pluralism as a Historical Phenomenon. A Regional and Multi-Level Approach to Health Care in German, British and Independent East Africa*, in: Anne Digby, Waltraud Ernst and Projit Mukharji (eds.), *Crossing Colonial Historiographies. Histories of Colonial and Indigenous Medicines in Transnational Perspective*, Newcastle 2010, pp. 99–113.

26 Michael Adas, *Machines as the Measure of Men. Science, Technology, and Ideologies of Western Dominance*, Ithaka, London 1989, p. 14.

27 George Basalla, *The Spread of Western Science. A Three-Stage Model Describes the Introduction of Modern Science into any Non-European Nation*, in: *Science*, Vol. 156, No. 3775, 1967, pp. 611–622.

world, were highly innovative in following the daily practices of natural scientists to their laboratory benches, curious about how they handled specific devices, how scientific “facts” were constructed and stabilized or, more generally, how the natural and the social order were reconfigured.²⁸ There was an attempt towards a more down-to-earth approach to science than offered by the many philosophers of science, who assumed that laboratories were the sites where pre-defined theories were verified or falsified by experimental means. Although different from Basalla’s “*science travels south*” model due to their theoretical ambitions, the laboratory ethnographies also featured a considerable neglect of the socio-political environment in which science takes place. According to Latour, it was not science that was shaped by a socio-political environment whatsoever but, on the contrary, it was society which was constantly remade through scientific action and this obstructed the view on a more contextualizing social or cultural history of lab science.²⁹

Breaking away from these approaches, historians of science working in Africa accumulated ample empirical evidence that science was anything but a Western export product but instead produced within and between colonies and nation-states and often the result of complex processes of interaction between various sets of actors. The vital role of African “*intermediaries*” in colonial science, the interactions, processes of appropriation or exclusion between different “*knowledge systems*” or several forms of “*local*” resistance and contestation against Western science became preferred sites of academic scrutiny.³⁰ Just remember the banners and voices raised against a strip of tarmac road leading to a space center in French Guinea in Peter Redfield’s account on French colonial technoscience or the resistance (and technical difficulties) of British smallpox vaccination in colonial India famously recollected

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- 28 Bruno Latour, Steve Woolgar, *Laboratory Life. The Construction of Scientific Facts*, Princeton 1986, Karin Knorr Cetina, *The Couch, The Cathedral, and the Laboratory. On the Relationship between Experiment and Laboratory Science*, in: Andrew Pickering (ed.), *Science as Practice and Culture*, Chicago, London 1992, pp. 113–138, Max Charlesworth et al., *Life Among the Scientists. An Anthropological Study of an Australian Scientific Community*, Oxford 1989.
- 29 Robert E. Kohler argues that a social history of laboratory science has not been written so far, see: Kohler, *Lab History. Reflections*, in: *Isis*, Vol. 99, No. 4, 2008, pp. 761–768, here: p. 764.
- 30 Schumaker, *Africanizing Anthropology. Fieldworks, Networks and the Making of Cultural Knowledge in Central Africa*, Durham, N. C., London 2001, Nancy Jacobs, *The Intimate Politics of Ornithology in Colonial Africa*, in: *Comparative Studies in Society and History*, Vol. 48, 2006, pp. 564–603, Patrick Harries, *Field Sciences in Scientific Fields. Entomology, Botany and the Early Ethnographic Monograph in the Work of H. A. Junod*, in: Saul Dubow (ed.), *Science and Society in Southern Africa*, Manchester, New York 2000, pp. 11–41, Helen Tilley, *Global Histories, Vernacular Science, and African Genealogies; or, Is the History of Science Ready for the World?*, in: *Isis*, Vol. 101, No. 1, 2010, pp. 110–119.

by David Arnold, just to quote two neat examples.³¹ In the process of unpacking the laboratories and turning to the “*field*” as a less controllable site of knowledge production in Africa, the history of science and medicine feels less at home with interpreting science as a hegemonic project imposed by the West.³² Instead, science’s reference to power becomes less certain as Helen Tilley has most recently shown in her subtle account on the history of the “*African Research Survey*.”³³

POSTCOLONIAL SWITZERLAND?

Does all this matter for Swiss historiography? One could easily say “*no*” because Switzerland has always been an outsider in colonial matters. However, as early as 1932, this widespread opinion was challenged by sociologist Richard Behrendt, who introduced the term “*tertius gaudens*” (the lucky third) to point to the benefits the country drew from European colonialism without however paying the costs for sustaining an empire.³⁴ Behrendt’s suggestion, and that of his followers, to locate Swiss history within the wider French and British empires has not just coaxed economic historians out of their shells but also proponents more committed to the “*cultural turn*” within the discipline.³⁵ So, for example, a range of

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- 31 Peter Redfield, *Space in the Tropics. From Convicts to Rockets in French Guiana*, Berkeley, Los Angeles, London 2000, p. 235, Redfield, *The Half-Life of Empire in Outer Space*, in: *Social Studies of Science*, Vol. 32, No. 5–6, 2002, pp. 791–825, here: p. 802, David Arnold, *Colonizing the Body. State Medicine and Epidemic Disease in Nineteenth-Century India*, Berkeley, Los Angeles 1993, p. 121.
- 32 Robert E. Kohler, Henrika Kuklick, Introduction, in: Kohler and Kuklick (eds.), *Science in the Field*, in: Osiris, Vol. 11, 1996, pp. 1–14, here: p. 4, Vaughan, *Health and Hegemony. Representation of Disease and the Creation of the Colonial Subject in Nyasaland*, in: Dagmar Engels and Shula Marks (eds.), *Contesting Colonial Hegemony. State and Society in Africa and India*, London, New York 1994, pp. 173–201, Warwick Anderson, *The Collectors of Lost Souls. Turning Kuru Scientists into Whitemen*, Baltimore 2008.
- 33 Tilley, *Africa as a Living Laboratory. Empire, Development, and the Problem of Scientific Knowledge, 1870–1950*, Chicago, London 2011.
- 34 Richard Behrendt, *Die Schweiz und der Imperialismus. Die Volkswirtschaft des hochkapitalistischen Kleinstaates im Zeitalter des politischen und ökonomischen Nationalismus*, Zürich 1932, More recently, the discussion about whether or not Switzerland’s economic relations can be classified as “*imperial*” flared-up in academic discourse, see: Thomas David, Bouda Etemad, *Gibt es einen schweizerischen Imperialismus?*, in: *Traverse. Schweiz-“Dritte Welt”. Von der Expansion zur Dominanz*, No. 2, 1998, pp. 17–27.
- 35 Among a burgeoning literature, see: Lyonel Kaufmann, *Guillaume Tell au Congo. L’expansion Suisse au Congo Belge, 1930–1960*, in: Etemad and David (eds.), *Les Annuelles. La Suisse sur la ligne bleue de l’Outre-mer*, Vol. 5, 1994, pp. 43–94, Niklaus Stettler, Peter Haenger, Robert Labhardt, *Baumwolle, Sklaven und Kredite. Die Basler Welthandelsfirma Christoph Burckhardt & Cie. in revolutionärer Zeit, 1789–1815*, Basel 2004, Andrea Franc, *Wie die Schweiz zur Schokolade kam. Der Kakaohandel der Basler Handelsgesellschaft mit der Kolonie Goldküste, 1893–1960*, Basel 2008.

historians started to explore how anthropological artifacts travelled from foreign places back to Switzerland and how the “*exotic*” was represented at home.³⁶ The natural sciences too provided a vast and fruitful field for analyzing various strategies of representation, as well as the scientific practices and interactions “*on the spot*”. While Patrick Harries meticulously recorded the scientific activities of Swiss mission societies in South-East Africa, Andreas Zangger and Bernhard Schär followed the traces of Swiss scientists in former Dutch colonies.³⁷ The theoretical toolbox provided by post-colonialism did not leave Swiss historiography unaffected. In a recent collection of articles, a number of Swiss historians not only acknowledged Switzerland’s role on a colonial stage but explored the effects of these entanglements on today’s Swiss society.³⁸ The major problem here is that what should have an “*effect*” upon the present is a singular notion of “*colonialism*”, which is detached from specific places and temporally stretched over four centuries.³⁹ Such a reading does not just neglect the different meanings of colonialism in different places and at different moments in time. It furthermore reiterates the favored assumption of the “*other*” as a mere object of representation and invites to ahistorically dismantle any of today’s practices as “*colonialist*”, starting with beauty-contests and ending with the promotion of mobile phones.

The history of Swiss development also has the potential for being interpreted as colonialism with other means. However, to date the historiography of Swiss development aid still remains largely underdeveloped. Still a classic in the field is the volume edited by Peter Hug and Beatrix Mesmer in 1993, in which they offered a thematic approach to the topic.⁴⁰ The 1990s also witnessed the publication of René Holenstein’s study “*Was kümmert uns die*

36 Serge Reubi, *Gentlemen, prolétaires et primitifs. Institutionnalisation, pratiques de collection et choix muséographiques dans l’ethnographie suisse, 1880–1950*, Thèse Université de Neuchâtel 2008, Patrick Minder, *La Suisse coloniale? Les représentations de l’Afrique et des Africains en Suisse au temps des colonies, 1880–1939*, Bern 2011.

37 Harries, *Butterflies and Barbarians. Swiss Missionaries and Systems of Knowledge in South-East Africa*, Oxford 2007, Andreas Zangger, *Koloniale Schweiz. Ein Stück Globalgeschichte zwischen Europa und Südostasien, 1860–1930*, Bielefeld 2011, Bernhard Schär, *Tropenliebe. Basler Naturforscher, holländische Imperialisten und die “Entdeckung” von Celebes um 1900*, Dissertation Universität Bern 2013 [forthcoming].

38 Patricia Purtschert, Barbara Lüthi, Francesca Falk (eds.), *Postkoloniale Schweiz. Formen und Folgen eines Kolonialismus ohne Kolonien*, Bielefeld 2012.

39 Cooper, *Postcolonial Studies and the Study of History*, in: Ania Loomba et al. (eds.), *Postcolonial Studies and Beyond*, Durham 2005, pp. 401–422, here: p. 404.

40 Peter Hug, Beatrix Mesmer (eds.), *Von der Entwicklungshilfe zur Entwicklungspolitik, Studien und Quellen*, Vol. 19, Bern 1993.

Dritte Welt?”, in which he especially engaged with the notion of “*Swiss solidarity*”.⁴¹ On the occasion of the 50th anniversary of the SWISS AGENCY FOR DEVELOPMENT AND COOPERATION (SDC) in 2011, Holenstein further delivered a historic overview of the past achievements of Swiss development aid, organized chronologically and complemented by a series of interviews with former Swiss development workers.⁴² However, more problem-oriented and theoretically informed are the books published by Monica Kalt and Konrad Kuhn on the basis of their Ph.D. research. Both draw from the insights of discourse theory to illuminate historical aspects of Swiss development initiatives. While Kalt especially deals with the high tide of Swiss development work in the 1960s and 1970s, Kuhn takes the topic further into the 1980s, looking at the activities in a period which is remembered as the “*lost development decade today*”.⁴³ Notwithstanding the quality of these works mentioned, what prevails in Swiss development historiography is an institutional perspective that focuses on Swiss experiences in the world without, however, bothering too much about how “*development*” was appropriated, reshaped locally or how these specific experiences in Africa, Latin America or Asia shaped the various development ideas back in Switzerland.

“*Striving for Excellence at the Margins*” has been written in the attempt to connect the academic traditions of the history of science and the history of development with more recent approaches in the history of medical research.⁴⁴ It is assumed that the long time span employed is suitable to break up the traditional periodization between the colonial era and the development decade and to study the breaks and continuities between these formations.⁴⁵ The history of the STI and the two research laboratories in Tanzania and Côte d’Ivoire serve as magnifying glasses under which science’s relation to wider societal and cultural factors become more glaring. “*Science*” as well as “*medical research*” is not understood as a homogenous set of theoretical principles or dogmata but rather as a range of cultural

41 René Holenstein, *Was kümmert uns die Dritte Welt. Zur Geschichte der internationalen Solidarität in der Schweiz*, Zürich 1998.

42 Holenstein, *Wer langsam geht, kommt weit. Ein halbes Jahrhundert Schweizer Entwicklungshilfe*, Zürich 2010.

43 Monica Kalt, *Tiersmondismus in der Schweiz der 1960er und 1970er Jahre. Von der Barmherzigkeit zur Solidarität*, Bern 2010, Konrad Kuhn, *Entwicklungspolitische Solidarität. Die Dritte-Welt-Bewegung in der Schweiz zwischen Kritik und Politik, 1975–1992*, Zürich 2011.

44 Wenzel Geissler, Catherine Molyneux (eds.), *Evidence, Ethos and Experiment. The Anthropology and History of Medical Research in Africa*, New York, Oxford 2011, Melissa Graboyes, *Surveying the “Pathological Museum.” A History of Medical Research Ethics in East Africa, 1940–1965*, Ph.D. Boston University 2010.

45 The Ph.D. studies of Pascal Schmid and Marcel Dreier constitute a further attempt to see Switzerland’s activities in the health and development sectors in a longer perspective, Pascal Schmid, *The Development of Rural Health Services in Ghana*, Ph.D. University of Basel 2013 [forthcoming], Marcel Dreier, *Healthcare, Welfare, and Development in Rural Africa. The Case of the Catholic Health Services in Ifakara/Tanzania in the 20th Century*, Ph.D. University of Basel 2013 [forthcoming].

practices carried out at various different sites at local, national and global levels.⁴⁶ Thus, the perspective that prevails throughout the thesis is that of “*multiple field-sites*”, defined as social spaces where questions of power inequalities but also the limits of the science in Africa become apparent.⁴⁷

This perspective requires us to cope with several limitations. First of all, to reflect the history of former Swiss research institutions from the “*margins*” means to abandon the ambitious aim of writing a comprehensive history of scientific institutions, as has been done in recent scholarship.⁴⁸ Rather, exploring the relationships between science and decolonization favors a more problem-oriented approach. Secondly, the scientific disciplines that make up the core of the study do not belong to the “*big sciences*” that dominated the period under discussion. In Switzerland as elsewhere, the era of COLD WAR rivalries sparked off disciplines as prestigious and politically determined as space research or molecular biology that, unsurprisingly, attracted the attention of later historians.⁴⁹ Compared to these efforts, the botanical, zoological and medical research as practiced in the colonies lived a shadowy existence. Scrutinizing this parallel universe of Swiss scientific production in Côte d’Ivoire and Tanzania is nevertheless important because it not only contributes to a better understanding of Switzerland’s place in the world, but might refine the argument of all those who assume that the rise of knowledge societies in the West is only due to structural changes which have taken place within Western societies.⁵⁰ Thirdly, readers who expect to be informed about “*traditional*” knowledge systems will barely see their needs met. This is simply because science and biomedicine have always been “*African*” as much as “*European*” products. Instead of asking the question of how different traditions of making sense of the world co-existed, overlapped or excluded each other, it is the refraction and reconfiguration of Swiss and African science that lie at the heart of the following pages. Historians who favor a combination of transfer studies and historical comparisons provided useful methodological tools to achieve this stated aim.

46 Andrew Pickering, From Science as Knowledge to Science as Practice, in: Pickering (ed.), *Science as Practice and Culture*, pp. 1–26, Dominique Pestre, Pour une histoire sociale et culturelle des sciences. Nouvelles définitions, nouveaux objets, nouvelles pratiques, in: *Annales HSS*, Vol. 50, 1995, pp. 487–522, here: p. 495.

47 Vaughan, *Curing their Ills*, p. 130.

48 Jens Ruppenthal, *Kolonialismus als “Wissenschaft und Technik”. Das Hamburgische Kolonialinstitut 1908 bis 1919*, Stuttgart 2007, Helen Power, *Tropical Medicine in the Twentieth Century. A History of the Liverpool School of Tropical Medicine, 1898–1990*, London, New York 1999.

49 Bruno J. Strasser, The Coproduction of Neutral Science and Neutral State in COLD WAR Europe. Switzerland and International Scientific Cooperation, 1951–1969, in: *Osiris*, Vol. 24, 2009, pp. 165–187, Strasser, *La fabrique d’une nouvelle science. La biologie moléculaire à l’âge atomique*, Florence 2006, Stephan Zellmeyer, *A Place in Space. The History of Swiss Participation in European Space Programmes, 1960–1987*, Basel 2007.

50 For a critical review, see: Jakob Vogel, Von der Wissenschafts- zur Wissensgeschichte. Für eine Historisierung der “*Wissensgesellschaft*”, in: *Geschichte und Gesellschaft*, Vol. 30, 2004, pp. 639–660.

METHODOLOGY AND PERSPECTIVES

Cutting Across History: The promises of “histoire croisée”

For more than half a century, comparative approaches have been considered the hallmark of a methodologically sound approach to historical phenomena. Comparisons were said to fulfill important heuristic, descriptive and analytical functions. They have helped to raise new questions which would have been impossible to ask otherwise, provided clear profiles of single cases, yielded in-depth explanations of historical process and “*de-familiarized*” the familiar.⁵¹ However, social history in general and comparative approaches in particular have faced serious criticism in recent years. A set of social, cultural and economic phenomena subsumed under the generic term “*globalization*”, and an increasing sense of global inter-connectedness and exchange, has led to a reassessment of historical instruments and analytical concepts. Mainly focusing on cultural transfers within Europe, French historian Michel Espagne, for instance, argued that, either implicitly or explicitly, comparative approaches employ a national perspective and work towards cementing differences between the objects of investigation.⁵² Given the pitfalls of a methodological nationalism inherent in comparative research and the many entanglements between the objects of analysis, “*transfer studies*” – so his argument went – should be at the center of historical scrutiny. Espagne’s emphasis on transfers reverberated strongly in the program of the advocates of a new imperial history who claimed that the mutual dependencies between “*metropoles*” and colonial “*peripheries*” were too pronounced to allow for a comparative view that analytically separates its objects instead of bringing them together in “*one analytical field*”.⁵³ The encounter between “*colonizers*” and the “*colonized*” was not marked by a unilateral imposition of Western concepts only. Colonialism left its marks on the colonizing society as much as it inscribed itself into the “*colonial subjects*”. Rather than reiterating the universality of categories such as “*capitalism*”, “*nation*” or “*modernity*”, they saw history’s role in constantly

51 Jürgen Kocka, Heinz-Gerhard Haupt, Comparison and Beyond. Traditions, Scope, and Perspectives of Comparative History, in: Kocka and Haupt (eds.), *Comparative and Transnational History. Central European Approaches and New Perspectives*, New York 2009, pp. 1–32, here: p. 4.

52 Michel Espagne, Au-delà du comparatisme, in: Espagne, *Les transferts culturels franco-allemands*, Paris 1999, pp. 35–49, Johannes Paulmann, Internationaler Vergleich und interkultureller Transfer. Zwei Forschungsansätze zur europäischen Geschichte des 18. bis 20. Jahrhunderts, in: *Historische Zeitschrift*, Vol. 267, 1998, pp. 649–685, here: p. 668.

53 Frederick Cooper, Ann Laura Stoler, *Between Metropole and the Colony. Rethinking a Research Agenda*, in: Cooper and Stoler (eds.), *Tensions of Empire. Colonial Cultures in a Bourgeois World*, Berkeley, Los Angeles, London 1997, pp. 1–56.

jeopardizing and de-centering these very categories.⁵⁴ However, as many authors note, the gulf between comparisons and transfers, between the logic of analytical separation and that of “*entanglement*” and connectivity is not as wide as commonly assumed. Transfer studies can hardly go without a comparison of the specific situations from whence and to where specific items are going to be transferred. Moreover, both approaches meet in their ultimate aim of “*trans-nationalizing*” historiography.⁵⁵ One concept that combines comparative approaches and transfer studies in unprecedented ways is that of “*histoire croisée*”, developed by the (German-) French historians Michael Werner and Bénédicte Zimmermann.⁵⁶ Werner and Zimmermann share the above-mentioned reservations against comparative history. According to them, comparative approaches are ahistorical and constructed on the basis of a range of untenable abstractions and flawed assumptions. Comparative historians tend to “*freeze their objects in time*” where there are processes of transformation at work; they assume parity between objects whereas these objects are constructed by historical forces; and they proclaim a separation of objects whereas there is factual interaction and reciprocal modifications.⁵⁷ As if this were not enough, comparativists are consumed by an “*optical illusion*”. They construct the observers’ position as being external

54 Dirk van Laak, Kolonien als “*Laboratorien der Moderne?*”, p. 257, Sebastian Conrad, Doppelte Marginalisierung. Plädoyer für eine transnationale Perspektive auf die deutsche Geschichte, in: *Geschichte und Gesellschaft*, Vol. 28, No. 1, 2002, pp. 145–169, here: p. 147.

55 Hartmut Kaelble, Die Debatte über Vergleich und Transfer und was jetzt?, in: *H-Soz-u-Kult*, 08.02.2005, <http://hsozkult.geschichte.hu-berlin.de/forum/id=574&type=artikel> (accessed, 15.03.2012), Jürgen Osterhammel, Transkulturell vergleichende Geschichtswissenschaft, in: Osterhammel, *Geschichtswissenschaft jenseits des Nationalstaats. Studien zu Beziehungsgeschichte und Zivilisationsvergleich*, Göttingen 2003, pp. 11–45, here: p. 43, Kocka, Haupt, Comparison and Beyond. p. 20, for transnational approaches in historiography see: Kiran Klaus Patel, *Nach der Nationalfixiertheit. Perspektiven einer transnationalen Geschichte*. Öffentliche Antrittsvorlesung an der Humboldt-Universität zu Berlin, Berlin 2004, Osterhammel, *Transnationale Gesellschaftsgeschichte. Erweiterung oder Alternative*, in: *Geschichte und Gesellschaft*, Vol. 27, No. 3, 2001, pp. 464–479, Albert Wirz, Für eine transnationale Gesellschaftsgeschichte, in: *Geschichte und Gesellschaft*, Vol. 27, No. 2, 2001, pp. 489–498, Sebastian Conrad, Jürgen Osterhammel, Einleitung, in: Conrad and Osterhammel (eds.), *Das Kaiserreich transnational*, pp. 7–27, for a critical acclaim by a social historian see: Hans-Ulrich Wehler, *Transnationale Geschichte – der neue Königsweg historischer Forschung?*, in: Gunilla Budde, Sebastian Conrad and Oliver Janz (eds.), *Transnationale Geschichte. Themen, Tendenzen und Theorien*, Göttingen 2006, pp. 161–174.

56 Michael Werner, Bénédicte Zimmermann, Beyond Comparison. *Histoire Croisée* and the Challenge of Reflexivity, in: *History and Theory*, Vol. 45, 2006, pp. 30–50, Werner, Zimmermann, Vergleich, Transfer, Verflechtung. Der Ansatz der “*Histoire croisée*” und die Herausforderung des Transnationalen, in: *Geschichte und Gesellschaft*, Vol. 28, 2002, pp. 607–636.

57 Werner, Zimmermann, Beyond Comparison, pp. 33–35, Jani Marjanen, Undermining Methodological Nationalism. *Histoire croisée* of Concepts as Transnational History, in: Mathias Albert et al. (eds.), *Transnational Political Spaces. Agents – Structures – Encounters*, Frankfurt, New York 2009, pp. 239–263, here: p. 245.

to the objects “while scholars are always [...] engaged in the field of observation.”⁵⁸ Though more sympathetic to transfer studies than to comparative approaches, the authors find fault with transfer studies too. In fact, despite their focus on historical processes and transformations, transfer studies suffer from the same shortfalls as do comparisons. They depart from national frameworks as units of reference, their categories employed are often static and they largely oversimplify matters in assuming linearity of transfers instead of complex patterns of reciprocity.⁵⁹ *Histoire croisée*, the authors maintain, is a reasonable solution because it combines the advantages of the comparative approach with those of transfer studies. *Histoire croisée* is especially appealing because it not only emphasizes the “inter-crossings” of the research object on different scales (micro-macro levels), or the historicity of concepts but reflects on the – often asymmetrical – relations between the researchers and their objects.⁶⁰

The study undertaken here borrows extensively from the insights provided by *histoire croisée*. On the one hand, the history of the two research laboratories in Côte d’Ivoire and Tanzania is conceptualized as a comparative study of Swiss science in a context of colonial and postcolonial domination. It strives for a “*variety finding comparison*”⁶¹ in order to modestly show that the “*Third World*” is not the homogenous entity commonly depicted in public discourses. Côte d’Ivoire and the Tanganyikan trust territory under British mandate not only provided different “*local*” research settings for Swiss science to evolve. Unsurprisingly perhaps, the two countries largely diverged with regard to their different status in the wider context of French and British empires and the different trajectories leading into the postcolony. However, the two case studies are not as clearly delineated from each other as to suffice the methodological requirements of “*pure*” comparisons. Not only did institutional models travel between the two sites themselves, more obvious was (and is) the laboratories’ connections to Switzerland and the STI, from whence and to where a steady flow of “*experts*”, scientific specimens, and ideas kept moving. It is this comparison not just of “*entanglements*” but of the underlying power-structures, the processes of “*de-connection*” and the re-drawing of boundaries – in short, the nature and shifts in intensity of these “*entanglements*” rather than the “*entanglements*” per se – which builds the analytic backbone of this study.⁶²

58 Werner, Zimmermann, *Beyond Comparison*, pp. 33–34, in this sense Werner and Zimmermann’s approach fits neatly in Ute Daniel’s idea of cultural history, see: Ute Daniel, *Einleitung: Kulturgeschichte – und was sie nicht ist*, in: Daniel, *Kompodium Kulturgeschichte. Theorien, Praxis, Schlüsselwörter*, Frankfurt am Main 2001, pp. 7–25, here: p. 17.

59 Werner, Zimmermann, pp. 35–37.

60 *Ibid.*, p. 41.

61 Charles Tilly, *Big Structures, Large Processes, Huge Comparisons*, New York 1984, chapter 7.

62 Ulrike Kirchberger, *German Scientists in the Indian Forest Service. A German Contribution to the Raj?*, in: *Journal of Imperial and Commonwealth History*, Vol. 29, 2001, pp. 1–26, Langwick, *Geographies of Medicine*, Heather Bell, *Frontiers of Medicine in the Anglo-Egyptian Sudan, 1899–1940*, Oxford 1999.

ARCHIVES AND WRITTEN SOURCES

En Afrique, quand un vieillard meurt, c'est une bibliothèque qui brûle Amadou Hampâté Bâ

Success or failure of such an endeavor depends largely on raw data processed and stored in archives. Archives are as much sites of circulation as they are indicators of connectivity. The power of historical archives, the accessibility of sources, the innate logic of preserving and exclusion, and the systems of classification determine the dominant perspectives in historical narratives. Archives are not just the “*laws of what could have been said*” during a specific epoch but they equally restrict the possibilities of what can be said about the past. As often remarked, archives, as material and imaginary expressions of state power, are closely related to the logic of governance. They are the products of states as well as fostering the development of states. The very term “*archive*” refers to the conjugation of knowledge and state power. Derived from the Greek word “*archeion*” (seat of the government), the Latin notion “*archivum*” denoted the site where official documents and public records were stored. The archival politics behind classifying, validating, silencing or destroying sources has put an end to the understanding of archives as innocent sites of knowledge retrieval. Rather, as Ann Stoler remarked, the “*archival turn*” has given way to the idea of archives as sites of “*knowledge production*”, as monuments of states as well as sites of state ethnography.⁶³ As a consequence, historical “*facts*” became less of a concern in historical accounts than discussions about the mechanisms of how these facts were produced.

The reciprocal relationship of archives as products of state and state-driving machineries is itself deeply rooted in history. At the risk of oversimplifying complex things, colonial states in Africa, as elsewhere, were masters in the “*art of lexical governance*”. As Arjun Appadurai and others claimed, colonial states trusted in numbers. They compiled statistics covering virtually all areas of domestic and public life or created new political and administrative categories along racial lines.⁶⁴ However, it is likely that the colonial archive is itself a blind spot that alludes to the failure of the bureaucratic utopia rather than to its realization. What tends to be the case for the colonial period reveals itself to be more painstaking as far as the era of post-independence is concerned. Andreas Eckert, who has so far written the most detailed account on the process of bureaucratization and state power in colonial

63 Stoler, Colonial Archives and the Arts of Governance, in: *Archival Science*, Vol. 2, No. 1–2, 2002, pp. 87–109, here: p. 90.

64 Arjun Appadurai, *Modernity at Large. Cultural Dimensions of Globalization*, Minneapolis, London 1996, pp. 114–135.

and postcolonial Tanzania, asserts that the documents of the ministries and administrative units have only very rudimentarily been filed.⁶⁵ Consequently, written testimonies on postcolonial Africa are not necessarily to be found in Abidjan, Dar es Salaam or Kinshasa but instead stored in well-organized archives in France, Britain or Belgium. It is here where the power of the postcolony becomes most palpable.⁶⁶ This is however not to imply that the written sources about the colonial or postcolonial past in Africa live a comfortable life in Europe. As a general rule: the closer one gets to the present, the more dispersed, inaccessible and precarious the state of the written accounts. My own work on the unclassified papers kept in the basement of the STI in Basel experienced a sudden change, when it was decided to transfer the historical records to another place in order to make room for a bio-bank containing large samples of health information from Swiss donors. There are a range of possible conclusions to be drawn from this incident. Firstly, it is an expression of the different scales of importance attached to different sorts of information. Secondly, rather than being placed in the storage rooms of a medical history archive, the largest amount of health information today is in the hand of research institutes or private companies, deciphered in high-tech laboratories instead of outmoded reading rooms. Without going into detail here, these new forms of bio-political repositories contain their own rules of economic gains, patients' rights and "*benefit-sharing*".⁶⁷ The third lesson I had to learn about the postcolonial archives of these non-state organizations was that their documents were assembled haphazardly, their status constantly threatened and their survival more due to considerations of space or temporal importance attached to their contents than to the procedures of selection through which government archives transform their single items from historical leftovers to "*archivable*" sources.⁶⁸ In other words, it was the disorder of things rather than the classification systems of states that reigns over these documents and which makes a reading "*along the archival grain*" difficult.

The sources that organize the narrative of the Ph.D. study at hand reflect both the seductive order of government archives, as well as the more patchy nature of non-governmental holdings. In general, sources were unearthed at different sites in Switzerland, France,

65 Eckert, *Herrschen und Verwalten. Afrikanische Bürokraten, staatliche Ordnung und Politik in Tansania, 1920–1970*, München 2007, p. 26.

66 Stephen Ellis, *Writing Histories of Contemporary Africa*, in: *Journal of African History*, Vol. 43, 2002, pp. 1–26, here: p. 12.

67 Cori Hayden, *Taking as Giving. Bioscience, Exchange, and the Politics of Benefit-Sharing*, in: *Social Studies of Science*, Vol. 37, No. 5, 2007, pp. 729–758.

68 Achille Mbembe, *The Power of the Archive and its Limits*, in: Carolyn Hamilton et al. (eds.), *Refiguring the Archive*, Dordrecht, Boston, London 2002, pp. 19–26, here: p. 20.

Tanzania and Côte d’Ivoire. The main archives were located in Switzerland. Apart from the already mentioned archive of the STI, the STAATSARCHIV BASEL-STADT (StABS) and the SCHWEIZERISCHES BUNDESARCHIV (BAR) housed the most relevant documents on the STI’s history. While the Staatsarchiv covers important aspects of the early period of the history of the STI, the BUNDESARCHIV allows one to contextualize the institution within the wider field of Swiss development work. One of the stated aims was to look at the history of the STI and the CSRS respectively through the lens of a wider scientific and economic network. As far as the relations between Swiss scientists and French scientists in Côte d’Ivoire was concerned, the papers kept in the ARCHIVES NATIONALES DE FONTAINEBLEAU invited one to grapple with the nature of Swiss-French interaction. Additionally, the largely unexplored archives of the NOVARTIS and NESTLÉ companies in Basel and Vevey linked further nodes into the vast network of technoscientific exchanges.

In Tanzania, the holdings of the TANZANIAN NATIONAL ARCHIVE (TNA), the TANZANIAN NATIONAL LIBRARY (NBA SECTION) and the EAST AFRICANA COLLECTION of the University of Dar es Salaam proved to be fruitful, especially for the colonial period. However, written historical “*evidence*” petered out as far as the period after independence was concerned. For the institutional history of the STIFL, the small holdings of the Ifakara branch (kept in a container and in an advanced state of decay) and that of the Mtwara branch served as a valuable source for specific aspects of the institute’s recent history. In Côte d’Ivoire, the state of historical record keeping proved even more disadvantageous. Due to the political crisis, the performance of the ARCHIVES NATIONALES DE CÔTE D’IVOIRE came almost to a standstill. The ARCHIVE DU MINISTÈRE DE LA RECHERCHE SCIENTIFIQUE allowed for some insights into French-Ivoirian scientific relations but more on a random basis than guided by a catalogue consulted beforehand.

Historians have employed two different strategies in order to cope with this unequal landscape of historical record keeping. The one strategy was to not to let oneself be too seduced by positivism but to read between the lines, to explain the silence and the omission of archives rather than to take their contents as something naturally given. Reading archival sources has become synonymous for a better understanding of the logic of archives themselves and that of colonial and postcolonial states. The other strategy was methodological diversification. “*Oral history*”, especially, provided by a critical anthropology, proved to be essential to capture as many different voices as possible and to create room for a variety of different interpretations that subvert dominant narratives.

A WORD ON VOICES

For the recent history of the two laboratories I was lucky to complement the unreliability of postcolonial archives with personal oral testimonies. The people I encountered at these ambivalent field-sites can roughly be divided into two different groups: on the one hand, there were those who were (or still are) affiliated to the institutes, who, by their professional status or specific tasks, shaped and were shaped by the institute's history. On the other hand, I was eager too to look beyond institutional borders and to reach those who in one way or another were "affected" by the biomedical endeavor; patients, who were enrolled in malaria vaccine trials, mothers, who opted for additional malaria treatment at rural dispensaries, or nurses who sometimes desperately try to keep these health institutions running. In the first case of "studying up", I found myself confronted by European and African biomedical "experts", whose knowledge about life phenomena or simply of "what worked and what did not work" in rural Africa largely surpassed my own understanding.⁶⁹ Given their position and social status they were likely to determine the course and the outcomes of the interviews. The encounters with members of the second group were not the less tricky. As often in over-researched places such as the Kilombero district, people living around Ifakara today are very much used to social scientists arriving on their doorstep interrogating them about certain "experiences". They are experts in reading social scientist's expectations and would most probably often react accordingly. My intention to make use of the interview technique was not inspired by a quest for an "authentic" African voice nor for certain "life histories" to unfold, which themselves represent a "strange career."⁷⁰ Rather, I was interested in the recollections and interpretation of specific events and to fill in the lacunas encountered in the archives.

STRUCTURE

Instead of presenting one case study after the other, followed by a general comparative conclusion, the thesis is structured along seven mostly comparative chapters that unfold chronologically. Integrating the comparative view as early as possible has the advantage of more thoroughly assessing the different predispositions imposed by geography, the asynchronies in time and the different actions chosen at the two laboratories, but it requires a great deal of jumping from one place to the other on the imaginary landscape. To facilitate

69 Laura Nader, *Up the Anthropologist – Perspectives Gained from Studying Up*, in: Dell Hymes (ed.), *Reinventing Anthropology*, New York 1969, pp.284–311.

70 Luise White, Stephan Miescher, David William Cohen, Introduction. *Voices, Words and African History*, in: White, Miescher and Cohen (eds.), *African Words, African Voices. Critical Practices in Oral History*, Bloomington, Indianapolis 2001, pp.1–27.

the reader's task, the first chapter delineates the history of Adiopodoumé (Côte d'Ivoire) and Ulanga (Mahenge) district (Tanzania) which, in the wake of a new importance attached to imperial science during WORLD WAR II, became major centers of knowledge production and disease intervention. Whereas France embarked on the project of "valorizing" their colony from around a large scientific institute established on the fringes of Adiopodoumé, the colonial state in Tanganyika took the spread of human trypanosomiasis (sleeping sickness) as an opportunity to intervene into African society and to remold African lifestyles according to its homegrown ideas of modernity and progress. Countries without colonies did not remain unaffected by such tendencies. As the second chapter shows, the Swiss government also displayed an increasing concern about the control of scientific activities during WORLD WAR II; tropical medicine was a welcome branch of scientific activity to emerge during the war because it had the potential to be a decisive vehicle for Switzerland's step into an international postwar order, and to mitigate pressures from the labor market by delegating the young Swiss workforce to the colonies. The chapter argues that it is this focus on the "nation" which gave way to a transnational move that ended in the establishment of the two research laboratories in Côte d'Ivoire (1951) and Tanganyika (1957). The role and nature of scientific practices are discussed in the third chapter. Largely inexperienced in colonial matters, Swiss scientists started to "discover", describe, order and classify the unknown environment. However, beyond the power of representations, the impact of Swiss science remained within narrow confines and science in the colonies was more often doomed to failure than it was crowned with success. It is this weakness of science rather than its strength that forms the underlying argument of this chapter. Basic science disappeared altogether when "development", as a new discourse and practice, arose on the horizon. Development was powerful enough to forge new networks between scientists, politicians and private companies. However, the two laboratories were drawn into the development euphoria to different degrees. Whereas in Tanzania, Switzerland mounted large-scale irrigation projects and started to train paramedical personnel, the CSRS could benefit less from the newly released funds. This situation did not necessarily improve when in 1967 the NESTLÉ FOUNDATION decided to establish itself in a wing of the CSRS and to embark on a substantial nutritional research project in Côte d'Ivoire. The detour via the history of NESTLÉ in Côte d'Ivoire is important in order to cast light on an early example of where science and development converged. It has to be reiterated, however, that development never meant just the unilateral application of Western science and technology in countries of the "Third World". The term, as used in this context here, describes a complex pattern of interactions and "negotiations" between different global and local actors. The rise of social medicine – the topic of chapter five is a case in point. Long before the premises of PRIMARY HEALTH CARE aroused international interest through the conference at Alma Ata (1978), the Tanzanian government pushed STIFL to more systematically include public

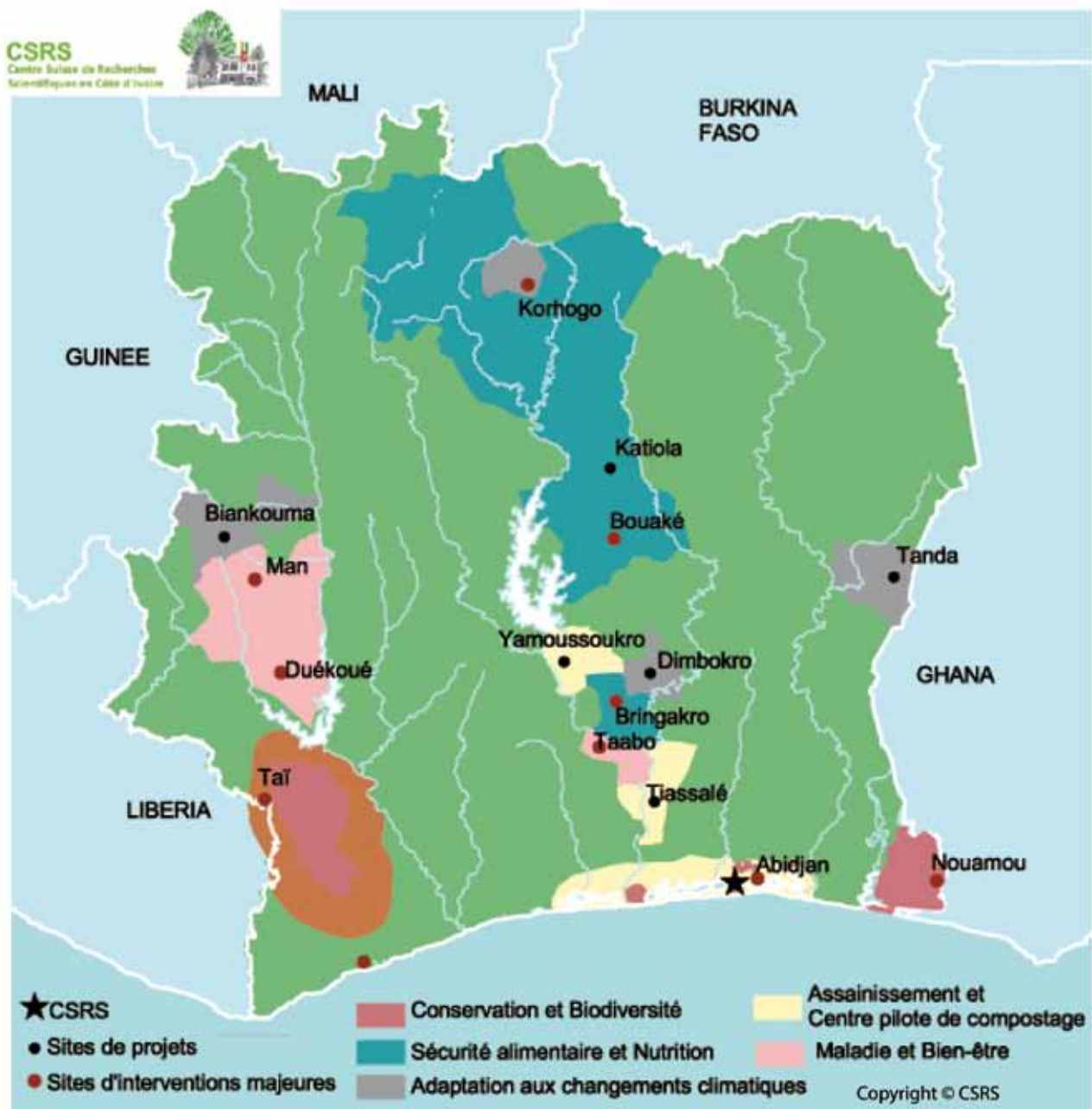
health and community medicine in their research and teaching agenda. As a consequence, research became less geared towards studying vectors than towards rural communities, whose wellbeing was conceived as constantly threatened by tropical ailments. As the example of the small village of Kikwawila shows, the villagers did not rank public health concerns as highly as the material improvement of the village's infrastructure. One of the neater lessons from research for development was that "*development became less a matter of benevolent outsiders assisting needy people in backward areas of the world than of citizens claiming entitlements*".⁷¹ The period when development and health were closely intertwined, offering possibilities for claim-making, was however short-lived. Chapter six explores the processes that, after conflicts between Swiss development actors, led to the disentanglement of research and development. The 1980s was marked by Africa's increased dependency on outside donors. The consequences of the foreign-imposed *Structural Adjustment Programs (SAP)* during the 1980s were an increased dependency of African states on outside money lenders. It was in this period when the two laboratories entered closer relationships with their host countries, when they developed into powerful NGO's within what James Ferguson and Akhil Gupta called a "*transnational governmentality*".⁷² Thus, this chapter grapples with the paradoxical process of decolonizing Swiss scientific research in Tanzania and Côte d'Ivoire, illustrated by the integration of the institutes into national health systems (as was the case with STIFL), the increased involvement of African "*experts*" in decision-making processes and the deployment of large-scale technologies. These technological developments are especially feasible in malaria research which, in the 1990s, experienced a high tide of global attention and funding. Unlike in previous episodes in the history of the disease, malaria was (and still is) no longer combated by single silver bullets but by a range of so-called integrated approaches. The "*technopolitics*" of malaria intervention as embedded in malaria vaccines and treatment regimes make up the core of the last chapter.⁷³ It is an attempt to break away from the researcher's perspective prevalent in the previous chapters and to do justice to the claims of writing the history of malaria from the perspective of the sufferers themselves.⁷⁴ It is here where the different strategies of the "*users*" of biomedical research come to the fore. However, before we delve into the different usages of Western technology, we should start with the geographical features and the historical legacies in those areas where science takes place.

71 Cooper, *Writing the History of Development*, p. 15.

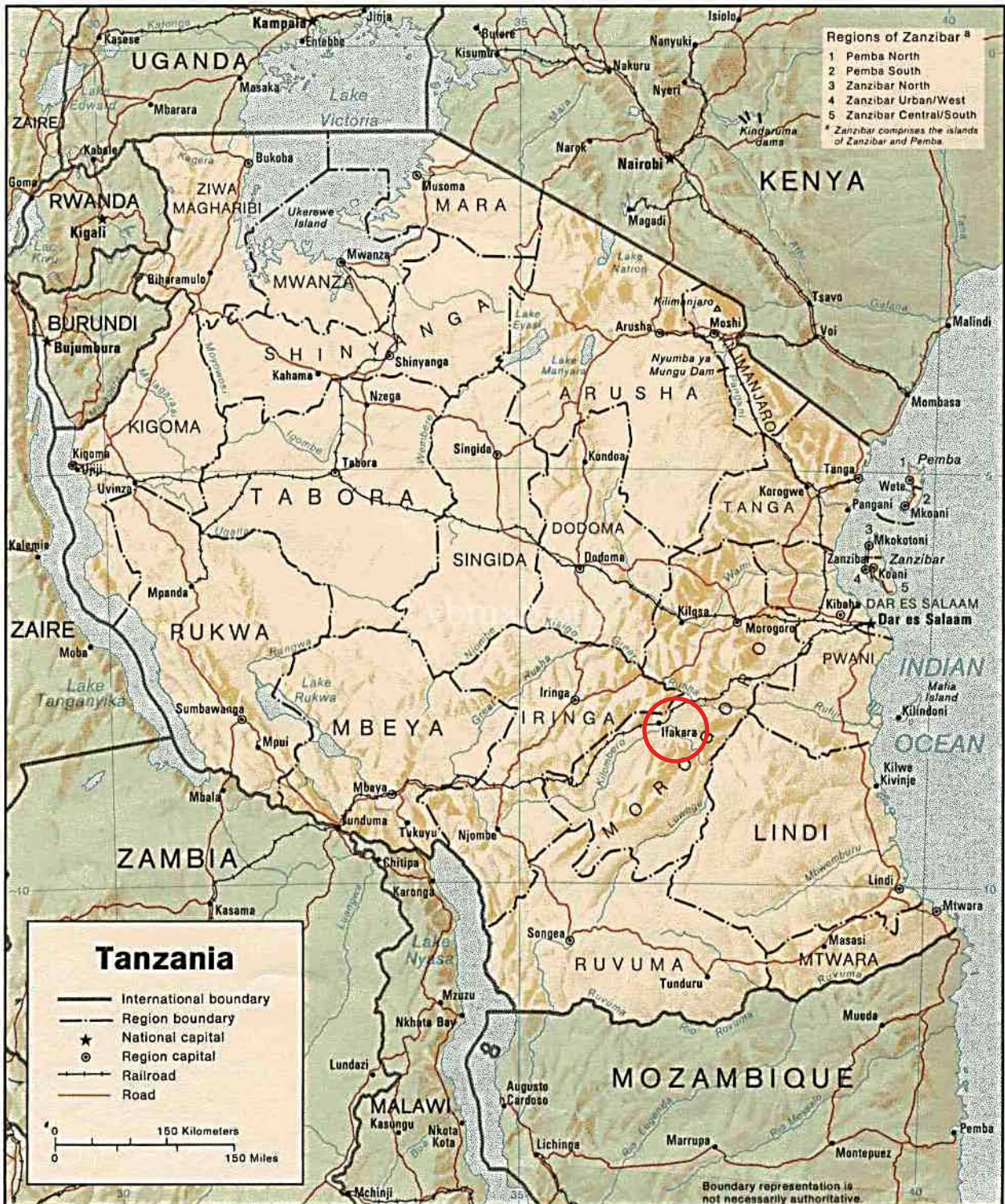
72 James Ferguson, Akhil Gupta, *Spatializing States. Towards an Ethnography of Neoliberal Governmentality*, in: *American Ethnologist*, Vol. 29, No. 4, 2002, pp. 981–1002.

73 Gabrielle Hecht, Introduction, in: Hecht (ed.), *Entangled Geographies. Empire and Technopolitics in the Global COLD WAR*, Cambridge, Massachusetts, London 2011, p. 3.

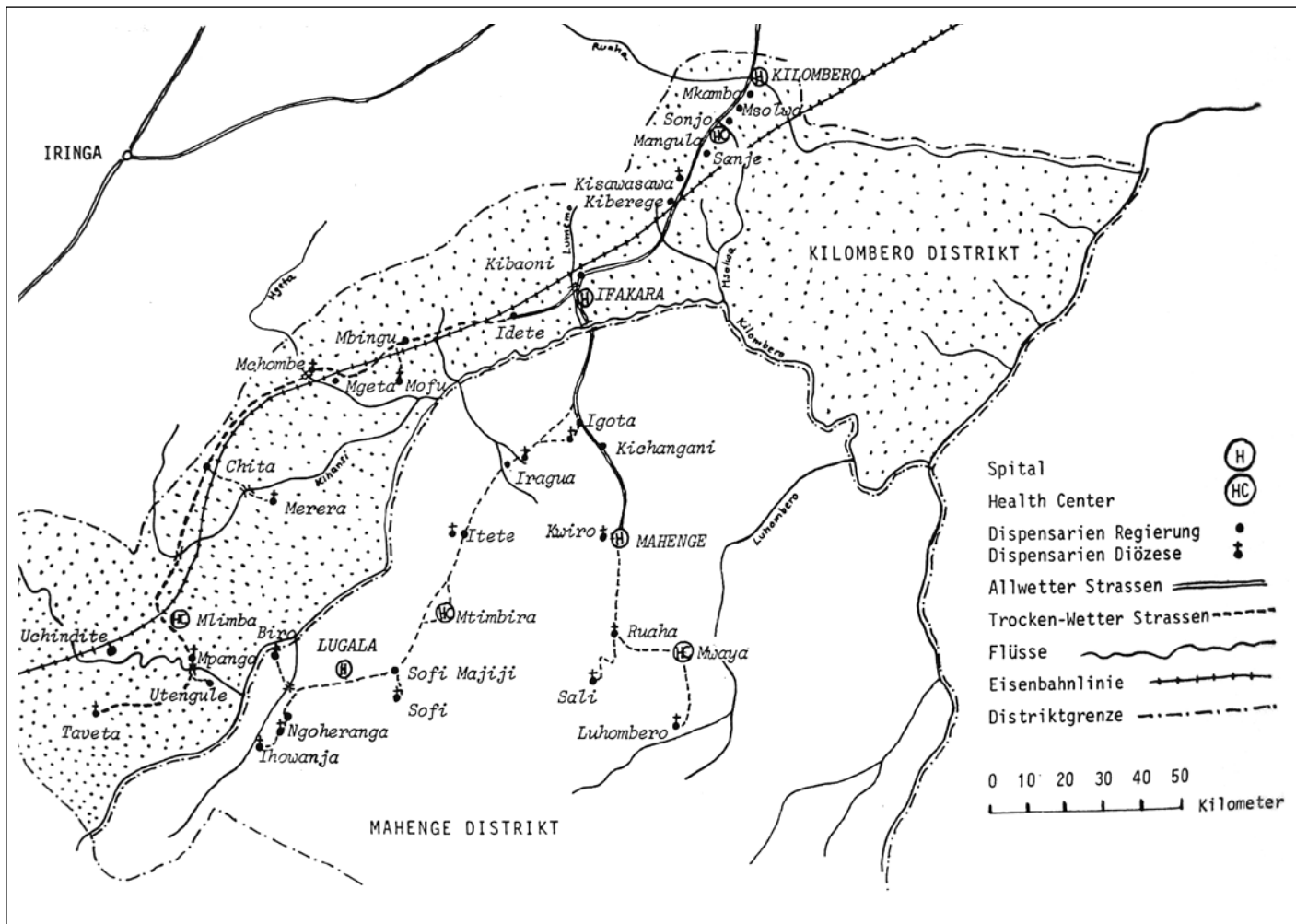
74 Schumaker, *Malaria*, in: Roger Cooter and John Pickstone (eds.), *Medicine in the Twentieth Century*, Amsterdam 2000, pp. 703–717, here: p. 714.



Map Côte d'Ivoire, source: Centre Suisse de Recherches Scientifiques (CSRS)



Map Tanzania



Map Kilombero District, source: Annual Report St. Francis Hospital, 1986

CHAPTER 1

Decolonization, Development and Geographies of Knowledge, 1930—1950

AN IMPERIALISM OF TRUTH?

This chapter serves as an introduction to familiarize the reader with time and places: It starts from the assumption that at the end of the 1930s and with the beginning of and during WORLD WAR II, the relationship between the French and British empires and their respective colonies was fundamentally reshaped. Science and technology played a special role in the reconfiguration of empire both as a tool for the “*development*” of the vast territories in Africa as well as an instrument of power inherent in the production of knowledge. The historical context of what has been called the “*imperialism of knowledge*” by Frederick Cooper and the “*second colonial occupation*” by Anthony Low and John Lonsdale is important for a better understanding of Swiss scientific policy and the emergence of the SWISS TROPICAL INSTITUTE (STI), the main subject of the next chapter.¹ Despite enhanced state control over the colonial scientific enterprise in both Britain and France towards the end of the 1930s, the assumption of science providing a power base for a reinvigorated colonialism after WORLD WAR II needs careful consideration. The African continent has never been the vast “*laboratory*” or the veritable experimental testing ground for the scientist’s zeal as several authors have recently alluded to. Rather, it is assumed that scientific interventions within the colonial context of domination has to be read as a set of different and sometimes contradictory constellations of protagonists who were themselves shaped by

1 Anthony Low, John Lonsdale, *Towards the New Order, 1945–1963*, in: Anthony Low and Alison Smith (eds.), *History of East Africa*, Vol. 3, 1976, pp. 12–16.

local constituencies.² The aim of the chapter is to retrace science's regained strength in the developmentalist project of the French and British empires during the 1930s and 1940s.³ It compares two scientific techniques of domination employed by the French and the British at two distinct sites in their territories Côte d'Ivoire and Tanganyika: Adiopodoumé and Mahenge (Ulanga) district. While Adiopodoumé had been selected by the French OFFICE DE LA RECHERCHE SCIENTIFIQUE ET TECHNIQUE D'OUTRE MER (ORSTOM) as the most suitable place for creating a large-scale scientific complex, British science found its way to Mahenge district in order to tackle a specific problem: the spread of human trypanosomiasis. There are two major insights that result from juxtaposing scientific activities in these localities. Firstly, and most modestly, it will be shown that decolonization opened up different trajectories for science in Côte d'Ivoire and Tanganyika. These differences are not only due to the different scientific activities practiced on the ground (basic research in the French – applied research in the British colony); the organization of science and the ties between metropolitan scientists and members of an African elite (strong – weak); the geographical location (close to urban centers – remoteness and difficult road and communication systems) but also due to the differences in how Paris and London ranked the two colonies within their larger concepts of the empire. Secondly, the important role played by Côte d'Ivoire for metropolitan France and the reckless negligence with which Britain treated its overseas territory Tanganyika says nothing about the impact of the scientific activities on the local populations. As the example of disease prevention in Tanganyika will show, colonial medicine was not simply restricted to urban areas but also practiced in the remote rural districts; it involved questions of disease prevention and was not limited to curing only but more importantly could lead to extreme exertions of power, even in those areas where government structures were almost non-existent.

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- 2 David Wade Chambers, Richard Gillespie, *Locality in the History of Science. Colonial Science, Technoscience, and Indigenous Knowledge*, in: *Osiris*, Vol. 15, 2001, pp. 221–240, David Turnbull, *Local Knowledge and Comparative Scientific Traditions*, in: *Knowledge and Policy*, Vol. 6, No. 3–4, 1993/94, pp. 29–54, David Livingstone, *Putting Science in Its Place. Geographies of Scientific Knowledge*, Chicago 2003, For empirical studies in the field of history of health see: Hunt, *A Colonial Lexicon* and White, *Speaking with Vampires*.
- 3 Against the backdrop of conventional wisdom that links developmentalist thinking to the end of WWII and to Truman's four point speech as the foundational document, development projects can be traced back at least to the 1930s, see for instance Michael Havinden, David Meredith, *Colonialism and Development. Britain and its Tropical Colonies, 1859–1960*, London, New York 1993.

REFASHIONING SCIENCE: SCIENCE FOR DEVELOPMENT

At the “Brazzaville conference” held in 1944, France reaffirmed its claim over its vast empire. The domination of colonial “subjects” and the mastery of bodies and nature was especially important for the former “*grande nation*”, humiliated by what Marc Bloch called the “*étrange défaite*” of 1940.⁴ The reinvigoration of the doctrine of empire shaken by the devastating effects of war rested on the widely shared assumption that the colonial territories were poverty-stricken and ready to be “*uplifted*”. Talking and thinking about the colonial peripheries was epitomized in the slogan of “*poverty, ignorance and disease*” widely circulating in the colonial offices and accounting for a considerable reduction of colonial complexity. The new emancipatory zeal accorded the government an unprecedented pro-active role and it took refuge in promises of science and technology. The latter was not entirely unjustified: As briefly alluded to in the general introduction to this study, WORLD WAR II was not only unsurpassed in the development of new technologies for mass destruction, it was equally a catalyst for major research projects in the field of public health.⁵ Hence, while the first word in the trilogy of “*poverty, ignorance and disease*” was considered as almost naturally given, the notions of “*ignorance*” and “*disease*” literally screamed out for scientific alleviation. However, the linking of colonial development to the scientific enterprise was not due to WORLD WAR II but can be traced back to the interwar period. Science ranked high in colonial minister Albert Sarraut’s project of the “*valorization*” of the colonies in the 1920s but it would take more than a decade until the efforts to better coordinate the vast array of French colonial science materialized. In 1937, then colonial minister Marius Moutet was unambiguous about the benefits of such coordination. As he contended in 1937:

*“The scientific organization in the colonies is an urgent necessity. It is a condition for economic valorization but it is also the burden of our colonialism to give an example, to spark a light in order to enlighten the path we are engaged on.”*⁶

4 Marc Bloch, *L'étrange défaite*. Témoignage écrit en 1940, Paris 1946.

5 Leo B. Slater, *War and Disease*. Biomedical Research on Malaria in the Twentieth Century, New Brunswick, New Jersey, London 2009.

6 Marius Moutet, *Ministre des Colonies*, quoted in: Archives Nationales Fontainebleau (ANF), ARCHIVES DE L'ORSTOM, 19900236, Art. 2, Conseil supérieur de la recherche scientifique, Raoul Combes, Office de la Recherche Scientifique Outre-Mer. Exposé des activités pour les années 1948–1949–1950, p. 7.

Moutet’s vision of a coordinated approach was taken a step further when in 1943 the OFFICE DE LA RECHERCHE SCIENTIFIQUE COLONIALE (ORSC) was founded and placed under the auspices of the Colonial Ministry. The Office had the triple aim of “*orienting, coordinating and monitoring scientific research in French overseas territories.*”⁷ For Raoul Combes, one of the major architects in refashioning French science and the Office’s director between 1943 and 1956, the enhanced government involvement in French colonial science was not least a question of scale:

*“Yet, the overseas territories are not anymore [...] a museum, a realm of experience or a vast reserve of scientific material. Such an attitude reveals a sort of “scientific colonialism” which is inconceivable given the huge task of the 20th century to completely take possession of nature [...].”*⁸

It is interesting to note that during WORLD WAR II, the Vichy regime in France embarked on a substantial, albeit discriminatory, welfare policy scheme that resulted in increasing state activities and rising numbers of social beneficiaries.⁹ As it seems, this emphasis on the “social” and “modernity” in domestic policies entered the realm of colonial policy too, where the Office promoted the concept of applied research with a special focus on improving the poor agricultural output of the French territories.¹⁰ This orientation was reflected in the naming of the institute when the Office was re-baptized ORSOM (OFFICE DE LA RECHERCHE SCIENTIFIQUE OUTRE-MER) in 1949 and ORSTOM (OFFICE DE LA RECHERCHE SCIENTIFIQUE ET TECHNIQUE OUTRE-MER) in 1953.¹¹ Beyond its special focus on agricultural research, the Office pursued the double aim of educating researchers and agricultural technicians as well as covering the territories with a range of new research institutes.¹² This latter aim was only feasible with the help of the “*Fonds d’Investissement et de Développement Économique*

7 Ibid., p. 3.

8 (ANF), 19900236, Art. 1, Création et Organisation de ORSTOM, Exposé fait par M. Le Professeur Combes à la 1^{ère} réunion du Conseil d’Administration de l’ORSC, pp. 1–5, here: p. 3, Raoul Combes held a chair of plant physiology at Sorbonne University and was director of the Office between 1943 and 1956.

9 Philippe-Jean Hesse, Jean-Pierre Le Crom (eds.), *La protection sociale sous le régime de Vichy*, Rennes 2001, p. 359.

10 Christophe Bonneuil, Patrick Petitjean, *Les chemins de la création de l’ORSTOM. Du Front Populaire à la libération en passant par Vichy, 1936–1945*, in: Petitjean (ed.), *Les sciences coloniales. Figures et institutions*, Paris 1996, série sous la direction de Roland Waast, pp. 113–161, here: p. 137.

11 Marie-Lise Sabrié, *Histoire des principes de programmation scientifique à l’ORSTOM (1944–1994)*, in: Petitjean (ed.), *Les sciences coloniales*, pp. 223–233, here: p. 226.

12 Ibid.

et Social” (FIDES), when in 1946 France ended the “*tradition of colonial self-sufficiency...making available metropolitan funds for development projects.*”¹³ In the decade following WORLD WAR II, the Office created thirteen new research institutes in their overseas territories, the first among which was the INSTITUT D’ENSEIGNEMENT ET DE RECHERCHES TROPICALES (IDERT) in Adiopodoumé/Côte d’Ivoire.¹⁴

Similar tendencies in the direction of a growing importance of research for the development of the colonies and signs for the ideologies of a “*new imperialism*” can also be detected in the British case. Major catalysts for a reconsideration and internationalization of the “*colonial question*” – especially with regard to widespread poverty and welfare – were the incidences in the West Indies where the depressing socio-economic situation culminated in the widespread labor riots of 1937 and 1938.¹⁵ The same year saw the publication of Lord Hailey’s massive “*African Survey*” a large-scale project (1929–1939) evaluating the role of knowledge necessary for imperial administration.¹⁶ The Survey was published in three volumes: “*An African Survey*” by Lord Hailey himself; “*Science in Africa*” by Edgar Barton Worthington; and “*Capital Investment in Africa*” by Sally Herbert Frankel.¹⁷ The African Survey had a strong influence on the future organization and institutional setting of colonial research. Lord Hailey was eager to set an end to science in Africa being almost entirely a private endeavor and he argued in favor of the government releasing substantial funds for research into African problems.¹⁸ The “*Colonial Development and Welfare Act*” of 1940 (the pendant to the French FIDES of 1946) permitted the expenditure of an amount of £5 million per year over a period of ten years overall for development and welfare projects in the colonies, as well as a sum amounting to £500’000 per year for research activities with no time limit attached and with as limited interference as possible from government administrators.¹⁹ Putting aside the establishment of the “*Colonial Research Fund*”, further legacies of the African Survey consisted in the setting up of the COLONIAL RESEARCH COMMITTEE

13 Cooper, *Modernizing Bureaucrats*, p. 70.

14 The IDERT was first named “*Institut Intercoloniale des Recherches Scientifiques*” (IIRS).

15 Michael Havinden and David Meredith mention Mussolini’s claim over Ethiopia and Germany’s demands for colonial restitution, Japanese expansion in East Asia as further reasons for Britain’s willingness to “*protect*” its colonies, see: Havinden, Meredith, *Colonialism and Development*, p. 195.

16 Tilley, *Africa as a Living Laboratory*, p. 3.

17 *Ibid.*, pp. 73–74.

18 Charles Jeffries, *A Review of Colonial Research, 1940–1960*, London 1964, p. 20, see also: Sabine Clarke, *A Technocratic Imperial State? The Colonial Office and Scientific Research, 1940–1960*, in: *Twentieth Century British History*, Vol. 18, No. 4, 2007, pp. 453–480.

19 Havinden, Meredith, *Colonialism and Development*, p. 218.

for which Lord Hailey accepted the chairmanship in 1942. Furthermore, a range of new scientific institutions mostly in Africa emerged. Along with the existing IMPERIAL COLLEGE OF TROPICAL AGRICULTURE in Trinidad and the AGRICULTURAL RESEARCH STATION at Amani in Tanganyika, they inscribed themselves into the fabrics of local societies.

ADIOPODOUMÉ

In 1945 the botanist and later director of the IDERT, Georges Mangenot, the zoologist Pierré Grassé and ORSTOM's first director general, André Nizery, travelled along the coast of the lagoon Ebrié in southern Côte d'Ivoire in order to prepare the ground for the future site of IDERT. Their investigation tour included the inspection of a large plateau close to the Ebrié village of Adiopodoumé. Towards the shores of the lagoon, the area was covered by a cocoa plantation while a dense secondary forest marked the plateau's natural inner frontier. Several anthropologists described the Ebrié as having originated from the north-east of the country and compared to their immediate neighbors, the Atié, Alladian and Adiokrou, they were said to have been the last to arrive at the lagoon's shores.²⁰ One of the lagoon's principal traits as a cultural space was its adaptation to outside change.²¹ The arrival of the French scientists in 1945 demanded a great deal of these skills. The special site, distant enough from Abidjan to get distracted by the allures of a burgeoning African city but close enough not to be entirely cut off from the centers of political decision-making, convinced ORSTOM to claim the territory as a future site for its scientific activities. The Ebrié could hardly ignore this wish. Jean Logon, who started his work for ORSTOM in the late 1940s, recalls the unfolding negotiations between the French and the Ebrié about the conditions for ceding the villagers' land to French science.²² The central figure in making a place for French science in Adiopodoumé was later president Félix Houphouët-Boigny, whose opinion the Ebrié found difficult to refute. Born to a chiefly family in 1905, Houphouët held a medical degree from the SCHOOL OF MEDICINE in Dakar and became a successful cocoa farmer in Côte d'Ivoire. After the end of the Vichy Regime, he founded the AFRICAN AGRICULTURAL SOCIETY (AAS) that became the vehicle for his election to the French legislature in 1945.²³ At the beginning of 1946 Houphouët-Boigny, with a number of other key figures in African politics, was the driving force behind the abolition of forced labor in all French colonies (known as the Houphouët-Boigny law) through which he earned

20 G. Niangoran-Bouah, Les Ebrié et leur organisation politique traditionnelle, in: *Annales de l'Université d'Abidjan (Ethnosociologie)*, Vol. 1, No. 1, 1969, pp. 51–91, here: p. 60. The most detailed ethnographic description of the region is Marc Augé, *Théorie des pouvoirs et idéologie. Étude de cas en Côte d'Ivoire*, Paris 1975.

21 François Verdeaux, Du pouvoir des génies au savoir scientifique. Les métamorphoses de la lagune Ebrié (Côte d'Ivoire), in: *Cahiers d'Études Africaines*, Vol. 26, No. 1–2, 1986, pp. 145–171, here: p. 155.

22 Interview with Jean Logon in Adiopodoumé, 06.08.2011.

23 Cooper, *Africa since 1940. The Past of the Present*, Cambridge 2002, p. 46.

widespread popularity and the uncontested reputation as the father of the nation. Raoul Combes invited Houphouët-Boigny to campaign with “*all his authority*” for the French cause and in 1947 the convention between the Office and the villagers stated that “*the villages of Adiopodoumé and Abadjidoumé are willing to allocate 199ha of land to the benefit of the Office de la Recherche Scientifique Coloniale [...]*”²⁴

Initial construction activities to what would become ORSTOM’s largest scientific complex outside France had already been started one year before the official convention between France and the Ebrié villagers was signed. Over time and on a surface totaling 228 ha there emerged several large laboratories, accommodation for researchers and their families, a hotel for students, a “*club*” with swimming pool and tennis court, schools and a dispensary, as well as a quarter for the required African workforce, who soon started to call the site “*petit plateau*” in analogy to the “*plateau*” – the exclusively European residential area in Abidjan.

With the IDERT, scientific practices in the colony and metropolitan aspirations were closely tied. As opposed to other ORSTOM creations, the IDERT had no funds of its own but was dependent on the ORSTOM budget.²⁵ Focusing on the training of young tropicalists, IDERT was placed into an institutional framework that allowed for a controlled transfer of knowledge between Paris and Adiopodoumé. Research activities in 1946 started with agricultural entomology. Towards the end of the year the botanist Jacques Miège, by then director of the STATION EXPÉRIMENTALE DE BOUAKÉ, joined the ORSC team as director of the laboratory of plant genetics.²⁶ Apart from entomology and botany, soil science and phytopathology were also amongst the first scientific branches that blossomed in Adiopodoumé. ORSTOM created a highly organized and highly efficient scientific bureaucracy in one of France’s most esteemed colonies. Its existence was owed to the narrowly woven web between French and African politicians that would be one of the main features of the whole decolonization process in Côte d’Ivoire. As we will see later, a considerable number of African politicians owed their later careers to the training acquired at Adiopodoumé. With ORSTOM, France for the first time invested in the performance of proper studies and collection of statistical information about the countries they ruled. Several of the “*villagers*” regarded ORSTOM as a foreign imposition; the geographical isolation of the site and the racial separation between

24 (ANF), ARCHIVES DE L’ORSTOM, 19900236, Art. 52, Raoul Combes to Félix Houphouët-Boigny, 11.03.1947 and Georges Mangenot, Convention entre l’Office de la Recherche Scientifique Coloniale (Institut Intercolonial d’Adiopodoumé) et les villages d’Adiopodoumé et d’Abadjidoumé, 17.09.1947, p. 1.

25 It wasn’t until 1977 that ORSTOM (Adiopodoumé) and ORSTOM (Paris) were separated, see: Farma Marie Madeleine Chourouba, Histoire de l’ORSTOM en Côte d’Ivoire, 1946–1994, Mémoire de maîtrise, Université d’Abidjan, 1993/1994, p. 26.

26 Miège would later become director of the botanical gardens in Geneva. As a member of the Commission for the Centre Suisse, he was the link between Swiss science and the French tradition epitomized by ORSTOM.

Africans and Europeans in day-to-day activities deeply implanted a sense of “otherness.” At the same time, with a number of 100 French scientists and over 300 African collaborators, ORSTOM emerged as a powerful employer for a large number of subaltern technicians, laboratory assistants and gardeners, providing an image of modernity that could either be emulated, resisted or nostalgically remembered long after ORSTOM had disappeared.²⁷

SCIENCE AND EXPERTISE IN MAHENGE (ULANGA) DISTRICT, TANGANYIKA

Rural Mahenge (Ulanga) district in Tanganyika also witnessed the advent of science and development as basic concepts of a more interventionist state in the interwar period.²⁸ After the defeat of German rule, Tanganyika became a British Mandate of the LEAGUE OF NATIONS in 1922. The status of a trust territory was important insofar as the British were accountable in their duty to guarantee the “*material and moral well-being and the social progress*” of the territory’s inhabitants.²⁹ British economic interests were however modest. As historian John Iliffe stated bluntly: “*Tanganyika had been Germany’s most valued colony. The British wanted to deny it to others.*”³⁰ With the end of WWI, a new protagonist entered the Mahenge scene: In the backwater of British imperialism, the Swiss Capuchin mission, Baldegg sisters and Italian Consolatras succeeded the German Benedictines whose project of evangelizing “*heathen*” Africans ended abruptly after the defeat of Germany. Inexperienced in colonial matters, the Capuchins established a stronghold in the district and complemented the spread of the gospel with Christian education and the delivery of health services.³¹ In Mahenge, the missionaries encountered an ethnically diverse populace resulting from a complex history of warfare, resettlement and boundary-crossings dating back to the 19th century. The main ethnic group living in the area consisted of people who, on the basis of a common

27 Chourouba, *Histoire de l’ORSTOM*, p. 19.

28 As an administrative unit, Ulanga district came into existence on August 7, 1899. Since then the district has been re-named several times. From 1899 to 1917 it was known as Mahenge Military district. Between 1918 and 1936 it was officially called Mahenge district. From 1936 to 1974 (until its division into two separate Kilombero and Ulanga districts) it was re-named Ulanga district, see: Mkelu Mbosa, *Colonial Production and Underdevelopment in Ulanga District, 1894–1950*, Dar es Salaam 1988, p. 23, Lorne Larson, *A History of the Mahenge (Ulanga) District, 1860–1957*, Ph.D. Study University of Dar es Salaam, Dar es Salaam 1976.

29 Quoted in John Iliffe, *A Modern History of Tanganyika*, Cambridge 1979, p. 247, see also: Margaret Bates, *Tanganyika. The Development of a Trust Territory*, in: *International Organization*, Vol. 9, No. 1, 1955, pp. 32–51.

30 Iliffe, *A Modern History*, p. 261.

31 Dreier, *Healthcare, Welfare, and Development in Rural Africa*.

language and customs, defined themselves as Wapogoro. Smaller in numbers but equally considering themselves as truly belonging to the district, irrespective whether or not these origins were acknowledged, were the Wandamba, Wangindo, Wabena, Wambunga and the Wangoni.³² Moreover, a comparatively wealthy group of Indians was living in the mission's headquarters in Ifakara, whose power derived from their monopoly over the rice trading system based on African middlemen.³³ Despite the mission society's active role in the provision of welfare services in the district, the colonial government too became more active in the interwar period. The colonial state's prime target was the improvement of the district's stagnating economy. It more systematically endorsed regulations and tried to integrate the fertile Mahenge district into world market structures.

One area that absorbed much of British post-war efforts in both time and expertise was agriculture. After WORLD WAR I, the colonial government supported cotton as an economic crop amidst a flourishing rice trade. The promotion of cotton was especially attractive for the Tanganyikan government because cotton trade could easily be regulated by government-approved companies where goods were traded in cash rather than in barter. *"An uncontrolled rice trade had negative political and economic ramifications for the British, because farmers had the potential to gain status and authority through channels of accumulation which were independent of state structures."*³⁴ The government efforts in growing cotton in Mahenge district were abandoned in the 1920s due to the farmers' widespread resistance but more so because world market prices for cotton plummeted after 1925.³⁵ The re-introduction of cotton in 1932 was, apart from new marketing regulations and the improvement of road communications, a measure that enhanced the Indian trading monopoly in the district, leveraged the Ifakara trading system while at the same time curbing the regional trading networks. *"In other words, the Mahenge (Ulanga) district became increasingly isolated – in economic terms – from the rest of southern Tanganyika."*³⁶ The notion of "colonial government" in these transactions and processes is however misleading. The extent to which agricultural policies

32 Maia Green, *Priests, Witches and Power. Popular Christianity After Mission in Southern Tanzania*, Cambridge 2003, p. 16, Jamie Monson, *The Tribal Past and the Politics of Nationalism in Mahenge District, 1940–60*, in: Gregory H. Maddox and James Giblin (eds.), *In Search of a Nation. Histories of Authority and Dissidence in Tanzania*, Oxford, Dar es Salaam, Athens 2005, pp. 103–113.

33 Larson, *A History of the Mahenge (Ulanga) District*, p. 234.

34 Monson, *Rice and Cotton, Ritual and Resistance. Cash Cropping in Colonial Tanganyika, 1920–1940*, in: Allan Isaacman and Richard Roberts (eds.), *Cotton, Colonialism and Social History in Sub-Saharan Africa*, Portsmouth, London 1995, pp. 268–284, here: p. 280.

35 *Ibid.*, p. 271.

36 Larson, *A History of the Mahenge (Ulanga) District*, p. 298.

were applied in the rural countryside largely depended on the interests and the capabilities of single individuals who in the role of district commissioners and “*local experts*” resided over the fate of “*their*” area of influence. One of the latter was the district commissioner Arthur Theodore Culwick, who with his wife Geraldine Mary Sheppard, an Oxford-trained anthropologist, administered the district between 1930 and 1945.³⁷ Given her professional background and his broad interests in “*local culture*”, the Culwicks started anthropological field research about health and diet of the Wabena “*their preferred tribe*” in the area. At the end of the anthropological field work, Culwick was left with the widely shared belief that Africa’s most pressing problem was a steady population decline, the reason for which was widespread infertility: He was however convinced that these problems could be addressed, if not overcome, by a more systematic application of science and technology. Culwick’s writings during the period reveal a shift from a liberal position of non-interference towards favoring more interventionist solutions towards the end of the decade. While he at the beginning of the 1930s vetoed against the introduction of cotton as a cash crop and defended local African industry against the creation of trade monopolies in Asian hands, he later supported more state-centered policies. To say it in his words:

*“The recent policy of the British Empire has been built up on the doctrine of “the sanctity of the individual”, one which in my view represents the high-water mark of political thought. We believe the individual is more important than the state [...] But while the idea of the sanctity of the individual is growing in importance, many are wondering whether he is best served by being left to his own devices. Are there not abundant signs all over the world that the free struggle of individuals for survival produces chaos, and that individuals themselves are clamoring for a co-ordination of their efforts?”*³⁸

One of the sources of Culwick’s plea for more government regulation and social engineering was the rural population itself, whose claims for better welfare services in the 1930s could not be overheard. The health sector was a case in point. The doctrine of indirect rule and the ideology of the “*self-sufficiency*” of the British colonies led to the creation of NATIVE ADMINISTRATIONS (N.A.) consisting of a so-called native authority (chief/council), native courts and a native treasury; the latter being in charge of collecting taxes, part of which were shifted to the central government while the rest were used for welfare

37 Veronica Berry (ed.), *The Culwick Papers, 1934–1944. Population, Food and Health in Colonial Tanganyika (now Tanzania)*, London 1994, pp. 14–15.

38 Arthur T. Culwick, *New Beginning*, in: *Tanganyika Notes and Records*, Vol. 15, 1943, pp. 1–6, here: p. 2.

expenditures.³⁹ Given the fact that the MEDICAL DEPARTMENT in Dar es Salaam mainly dealt with urban health care and the major hospitals, leaving alone with the burden of adequate rural health care delivery, the N. A. system not only created double standards in health but also an effective means to address inaccuracies in welfare provision. In 1936, Ifakara's Indian community complained about the deplorable quality of health care provided by the mission and asked for a government hospital in town. The discussions between the Indian community and the Tanganyikan government would well continue over the next decade. They erupted in the context of a political-administrative reform in the course of which Kiberege as the headquarters of the correspondent division ceased to exist in 1944. Apart from the mission-led dispensary in Ifakara which charged user fees, there was an N. A. dispensary staffed with a "dresser" whose quality of care was considered inadequate given the burden of disease.⁴⁰ Culwick declined the wishes on the grounds that Ifakara would not be a suitable place for investment: "[...] if Ifakara grows," he contended, "or if the Lumemo [the nearby river] defeats our efforts to prevent it changing course, the settlement will probably have to be moved. It would therefore be most unwise to sink money in buildings there at present."⁴¹ Culwick's reservations to invest in Ifakara were more due to the hazy future of the village than they were a plea against investments in the rural dispensary system as such. It was the outbreak of sleeping sickness that not only merged the quest for biomedical research with that of rural development, but that offered Culwick the possibility to put his ideas about health and general progress into practice.

HEALTH POLICY AS SOCIAL – AND ECONOMIC POLICY.

THE CASE OF SLEEPING SICKNESS IN TANGANYIKA

On December 12th, 1942 Mbakala binti Kameta, a thirteen-year old girl, died in a mission dispensary in Ifakara. It was only half a year ago that she had arrived in Ifakara where she stayed with a man called Anton Mtemaneja. Shortly before her premature death she suffered from a high fever that was related to human sleeping sickness by the Swiss physician Dr. Alois Gabathuler, who was in charge of the government hospital in Mahenge and who was residing more or less accidentally in Ifakara at the time.⁴² Cases of human trypanosomiasis were not new to Tanganyika. In the aftermath of WORLD WAR I, major outbreaks of the disease had been reported in Mwanza (1921–23), Liwale (1924) and Ufipa-Tabora and the

39 Iliffe, *A Modern History*, pp. 319–320.

40 Tanzania National Archive (TNA), 450, 653, Ifakara Station, 1936–1948, K. Truth, Boma Wanted, in: *Tanganyika Standard*, 23.01.1941.

41 *Ibid.*, A.T. Culwick, 27.01.1941, p. 1.

42 (TNA), 61/104/G, Sleeping Sickness Mahenge, K. Dougal to the Sleeping Sickness Officer in Tabora, 07.01.1943.

disease soon attracted colonial and metropolitan attention in terms of scientific action as well as public funding.⁴³ At the beginning of the 20th century, there was widespread confidence that the disease was caused by the parasite *Trypanosoma gambiense*, transmitted by the fly vector *Glossina palpalis*.⁴⁴ But still, complex vector-parasite-man interrelations and especially the role of game have not yet been fully understood. As a reaction to the disease, colonial governments displayed different strategies which of course differed over time: separating the healthy from the sick, the killing of game and environmental modifications – or a combination of these – were the favored approaches. One of the advocates of the environmental approach was Charles Swynnerton, a Rhodesian settler and skilled amateur who became intrigued by the ecological aspects of the spread of sleeping sickness. After extensive studies on tsetse in Mozambique, Swynnerton was elected director of the TSETSE RESEARCH DEPARTMENT in Tanganyika and assigned to Old Shinyanga where he continued research on the effect of controlled bush burning and fly extirpation and from where he informed the government during the Mwanza outbreak in the 1920s.⁴⁵ Given the importance of game as a reservoir for the reproduction of the parasite and the fact that the *Glossina* could only traverse a short distance without bush cover, Swynnerton was convinced that the disease was most effectively tackled by creating a natural barrier between people and game. This idea lingered on in the 1930s and 1940s when sleeping sickness provided the colonial government a legitimate basis for intruding more deeply into Ulanga district as soon as the first fatalities entered the medical record in the mid-1930s. The official answer to the emerging threat was to concentrate the widespread population into so-called “*sleeping sickness concentrations*” and to clear the vegetation around the new settlements so as to reduce the risk of new infections. Disease prevention was always but just one argument for the resettlement schemes. Other arguments such as better administration of the population or better access to medical care or educational facilities also loomed large. Culwick, who was the driving force behind these schemes in Ulanga involving over 20,000 people, defended the project not so much on the grounds of prevention from disease but on the several amenities these interventions would yield for the colonial state: “[...] *freedom from the depredations of animals, easier access to medical and educational facilities, easier administration, more varied social intercourse and so on. Freedom from Sleeping Sickness cuts no ice at all, but the other benefits definitely do.*”⁴⁶

43 Eleanor Fisher, Alberto Arce, *The Spectacle of Modernity. Blood, Microscopes, and Mirrors in Colonial Tanganyika*, in: Alberto Arce and Norman Long (eds.), *Anthropology, Development and Modernities. Exploring Discourses, Counter-Tendencies and Violence*, London, New York, 2000, pp. 74–99.

44 Michael Worboys, *The Comparative History of Sleeping Sickness in East and Central Africa, 1900–1914*, in: *History of Science*, Vol. 32, 1994, pp. 89–102, here: p. 90.

45 Tilley, *Africa as Living Laboratory*, p. 194.

46 (TNA), 61/104/H, *Sleeping Sickness Ulanga-District*, A. T. Culwick, 02.07.1943.

In the last couple of years a growing body of scholarship has taken sleeping sickness operations as its preferred subject of study in order to deconstruct the “benign” aspects of colonial medicine.⁴⁷ For instance, Maryinez Lyons, writing about sleeping sickness policy in Uele District in the Belgian Congo between 1903–1914, contended that the colonial government’s major concern behind the spread of the disease was declining economic performance and the government’s answer resulted in a myriad of interventions that focused on regulating the African body and the movement of people across the territory.⁴⁸ In a similar vein and in the tradition of the writings of John Ford, Helge Kjekshus argued that the sleeping sickness policies in Tanganyika destroyed the long-established ecological balance between man and his natural environment and negatively influenced the spread of the disease.⁴⁹ This line of argument was, however, not the achievement of critical historians writing in the 1970s and 1980s but already hinted at by observers from within Tanganyika’s medical services. In 1959, James M. Liston offered the opinion that

“It is now considered more practicable and constructive to allow and to encourage development within a sleeping sickness area. For example, the building of new roads to open it up and the welcoming of settlers rather than the establishment of sleeping sickness settlements or “concentrations” of the old type.”⁵⁰ These older settlements “lead to over-use of the land and soil impoverishment within small heavily settled areas, with all the surrounding empty country abandoned to the tsetse fly.”⁵¹

For Liston, and to a much larger extent for Culwick too, the sleeping sickness concentration worked perhaps not effectively towards disease prevention but it satisfied their understanding of a “modern” African society in which processes of economic production and social reproduction, of the movement of people and the distribution of germs could be brought under control. Linking the idea of the “concentration” with the premises of “development” was nothing less than a showcase of what Giorgio Agamben analyzed as the very fabric of modernity: a state of emergency which as a political structure appears more and more as social rule.⁵²

47 This tradition of scholarship can be traced back to the 1980s, see especially: Roy MacLeod, *Disease, Medicine and Empire*, London 1988, Michael Worboys, *Science and British Colonial Imperialism, 1895–1940*, Ph.D. Study University of Sussex, Sussex 1979.

48 Maryinez Lyons, *From “Death Camps” to Cordon Sanitaire. The Development of Sleeping Sickness Policy in the Uele District of the Belgian Congo, 1903–1914*, in: *Journal of African History*, Vol. 26, No. 1, 1985, pp. 69–91, Lyons, *The Colonial Disease. A Social History of Sleeping Sickness in Northern Zaire, 1800–1940*, Cambridge 1992.

49 Helge Kjekshus, *Ecological Control and Economic Development in East African History. The Case of Tanganyika 1850–1950*, London 1977, Ford, *The Role of the Trypanosomiases in African Ecology*.

50 MINISTRY OF HEALTH (MOH) Library, James M. Liston, Permanent Secretary (Director of Medical Services) *Report on Health Services 1959*, pp. 1–56, here: pp. 14–15.

51 *Ibid.*

52 Giorgio Agamben, *Homo Sacer. Die Souveränität der Macht und das nackte Leben*, Frankfurt am Main 2003, p. 30.

What interests us in the following is this interplay between establishing sleeping sickness concentrations in Ulanga district and the larger conceptions of rural development. The story emerging from the sources is however not one of an all-encompassing colonial state bureaucracy which, during WORLD WAR II, continuously and comprehensively brought rural life under its own administrative logic. Rather, the colonial administration was divided up into modernization-inspired social technocrats such as Culwick, social reformers who opted for a slower path towards modernity and people such as the director of Medical Services, Alfred Turner Sneath, whose criticism of the resettlement schemes touched upon more fundamental issues. Moreover, the colonial government had never been in the position to implement its far-reaching development utopias on the ground. Instead it created geographically scattered “*local situations of modernity*” which satisfied the ideas of progress of those who supported the scheme most vigorously.⁵³

Sleeping Sickness situation in Ulanga

In 1936, the authorities of Ulanga district were alarmed by rumors about sleeping sickness taking its toll among the population of southern Liwale district. The district had long been considered as “*fly-infested country*” and a spreading of the disease to neighboring Ulanga district along the major labor routes was considered just a matter of time.⁵⁴ Culwick’s protective measures included the creation of settlements where the scattered population should be shifted to, but it was only in 1939 when he was allowed to turn his scheme into practice. In 1939 there were three cases of sleeping sickness reported in Ulanga; one year later there were seventy-seven cases and seventeen already in the first month of 1941.⁵⁵ In 1940, large sections of the eastern and southern parts of the district were singled out and demarcated as a conservation area, incorporated in the Selous Game Reserve and closed to human habitation.⁵⁶ Indeed, all of the Wapogoro and Wangindo living in the area were brought into two resettlements the Luhombero Valley (1941) and Ruaha Valley (1942) respectively. Later, smaller concentrations at Kichangani-Lupiro (1943), Iragua (1943), Itete (1943) and Sofi-Majji (1944) were added.⁵⁷ Preceding the selection of the sites was a scientific study about the local conditions of the new areas, their topographic characteristics and the fertility of

53 Fisher, Arce, *The Spectacle of Modernity*, p.94.

54 (TNA), 461/16/2, *Sleeping Sickness General, 1930–1940*, anonymous, *Sleeping Sickness*, 22.05.1936.

55 (TNA), No. 28446, *Sleeping Sickness Concentrations in Ulanga*, E. C. Baker, Provincial Commissioner Eastern Province and R.R. Scott, Schedule I, *Ulanga-District – Mahenge Area*, 09.03.1941, pp. 1–2, here: p. 2.

56 Larson, *A History of the Mahenge (Ulanga) District*, p. 302.

57 *Ibid.*, p. 303.

their soils. Theoretically, the new settlements should have been endowed with schools and dispensaries, each of the latter staffed with tribal dressers trained to “*use the microscope to the extent of being able to recognize hookworm, roundworm, bilharzia, trypanosomes, filarial, relapsing fever, and malaria sometimes.*”⁵⁸

From early on, such schemes had also their critics: In several memoranda and letters, the Canadian Paul Alfred Turner Sneath, succeeding R. R. Scott in the rank of Director of Medical Services in 1944, eloquently expressed his displeasure over the uncontrollable proliferation of the rural dispensary system that came along with the sleeping sickness measures. The consequence of the spread of health infrastructure to the “*African mind has been that his mystical susceptibilities have been enhanced with the idea that the European can provide by bottle, tablet, dressing and syringe a remedy to all his physical and mental disabilities without any effort on his part.*”⁵⁹ The mushrooming of the physical health facilities in Ulanga district, as demanded by Ifakara’s Indian community, and the uncontrolled distribution of drugs to the rural sufferers ran counter to Sneath’s conception of rural health care that focused on preventive aspects and social medicine and in so doing forestalled later discussion on the main features of African public health care.⁶⁰ Interpreting Sneath’s reactions more as a plea for a behavior change on the part of the Africans than as a fundamental criticism of the resettlement schemes as such, the colonial government pursued its policy of a carrot and stick approach: people’s compliance to the scheme should have been increased through incentives such as tax exemptions. All those who tried to resist government regulation, however, were forcefully removed. It was of vital importance to gain the support of the chiefs and to convince them about the advantages of the new sites in economic, medical and social terms. An often uttered concern by the government was to attain a sufficient number of settlers in order to make the concentrations self-sustaining or even profitable as economic units. The responses of the local population to the resettlement schemes, however, constantly jeopardized the administration’s measurements of scale. In 1943, 15% of the Luhombero settlers deserted and crossed the border to Liwale, convincing the Provincial Commissioner that “*if the ebb from the settlements continues, and there is no reason to suppose it will do otherwise, the settlement may become too small to keep out the fly and the urge to desert spread to other concentrations.*”⁶¹

58 (TNA), 61/104/H, A. T. Culwick, 02.11.1942, p. 1.

59 (TNA), 450, 653, P.A.T. Sneath to Provincial Commissioner Eastern Province, 01.09.1949, pp. 1–2, here: p. 1.

60 Bruchhausen, *Medizin zwischen den Welten*, p. 117.

61 (TNA), No. 28446, Provincial Commissioner, 08.06.1943, p. 2.

Even though Culwick never precluded the option of returning the deserters forcefully, he was nevertheless convinced that the benefits of closer settlement would sooner or later make them come back voluntarily. In a similar vein, the district's administrators never interpreted the desertions as a criticism of sleeping sickness interventions as such but related the phenomenon to a "*few turbulent spirits*" who maintained close social contacts to communities in Liwale and Songea.⁶²

The major resettlements schemes in Luhombero and Ruaha were not yet finished when Culwick accelerated the pace for social engineering and promoted the settlements as show-cases for modern society for other regions too. The districts' northern parts, especially, should be subjected to sleeping sickness regulation and Mgeta and Mbingu were identified as the suitable places for closer settlement. Culwick's plea for more comprehensive political action went hand in hand with the support for scientific investigation; science and politics should be merged by all means and even more than by the spread of sleeping sickness, Culwick was threatened by a political-administrative apparatus which could be unperceptive to scientific knowledge.

*"I am opposed to concentrating populations in this district unless it can be done properly. We have to deal with people living out of sympathy with their environment, and it is so easy to save them from sleeping-sickness only to kill them with numerous other diseases unless we plan carefully."*⁶³

However, the relationship between science and policy was never well balanced and an administrative logic always seemed to predate scientific considerations. Not accidentally did Culwick mention the importance of scientific planning in the persuasion of resettlement policies. The problem soon identified by politicians and agricultural experts alike was that, despite all assertions and respective investigations, the soils in the new settlements became exhausted and people started to farm their crops outside the allotted areas. There was a wide range of different opinions on how soil erosions could be brought under control. While Culwick seemed to have preferred leaving the farmers to plant outside clearly demarcated areas, others such as the *Senior Agricultural Officer* A. H. Savile were more in favor of respecting the confinements of the newly established settlements. According to him there were still vast strips of fertile land within the settlements and he was puzzled by the fact that Culwick seemed to be "*prepared to accept the natives' excuses as having more weight than...my training and expertise [...]*"⁶⁴ The gulf between science and policy became more accentuated in the newly-planned settlements of Mgeta and Mbingu.

62 Ibid.

63 (TNA), 61/104/H, Sleeping Sickness Mahenge, 1941–1942, A. T. Culwick, 13.06.1942, p. 1.

64 Ibid., A. H. Savile to A. T. Culwick, 17.12.1943, p. 3.

In 1942 already, the Provincial Commissioner for Eastern Province criticized the fact that the new home for thousands of people had never been subject to agricultural scrutiny and he proposed to postpone the work already undertaken “*until the end of the war unless an increase in the number of cases of sleeping sickness amounting to an epidemic, renders such a course imperative.*”⁶⁵ The voice of the Provincial Commissioner remained unheard: In summer 1945 a group of specialists, among which were Paul Alfred Turner Sneath, H. Fairbairn, the government sleeping sickness officer in charge of the concentrations and C. E. J. Biggs, the Director of Agricultural Production and member of the Tsetse Committee, met in order to discuss the ongoing activities at Mgeta and Mbingu. The reason behind the meeting was Biggs’s veto against starting any activities in these areas before a sound agricultural survey had been conducted. What he had to learn during the meeting however, was that the movement had already been started and “*that it would be a matter of great political difficulty if settlement was held up for another year.*”⁶⁶ Overruled by the government’s quest for quick action, Biggs’s veto against the current practices vanished into thin air. Somewhat consternated, he made clear:

*“In these circumstances it seemed impossible to stick to the veto and settlement will now proceed, although I have made it perfectly plain that I can accept no responsibility if it is found that the area is unsuitable for agriculture or if the size of it is too small for the number of people it is proposed to settle in it. Neither have I accepted responsibility for any bad practices that may result through lack of planning beforehand.”*⁶⁷

As it seems, the colonial government operated on the basis of different reasoning. On the one hand, there were those like the Provincial Commissioner, E. C. Baker or the Director of Agricultural Production, C. Biggs, who welcomed the sleeping sickness concentrations as fostering agricultural production in the area. However, as soon as they recognized that the project had gone awry in economic terms, they were likely to oppose the whole endeavor. Culwick adhered to the idea of closer settlement for different reasons. Less concerned about the settlements’ effects on economic prosperity or the course of the disease, the settlements constituted an icon of modernity and a model from where a future African society could be planned. For him at least, the resettlement schemes were the very basis for a larger and more ambitious project of rural African development.

65 Ibid., E. C. Baker, 07.07.1942, p. 1.

66 (TNA), No. 28446, C.E.J. Biggs, Director of Agricultural Production, 01.08.1945, p. 1.

67 Ibid.

THE ULANGA RURAL DEVELOPMENT SCHEME, 1944–1951

The rural medical services in Ulanga district were mainly the result of a political-administrative logic that came to the fore in containing the spread of sleeping sickness over the territory. Disregarding the many reports written by the Provincial Commissioners on the mixed success of the sleeping sickness concentrations, Culwick heralded the measures as the turning point in the district's demographic development. While his scientific work on diet and health bore the stamp of the common discourse on decreasing fertility in Africa, the sleeping sickness concentrations were able to reverse this alarming trend:

*“The policy of concentration is bringing an increasing number of people within easy reach of medical facilities, and is producing results which, although not unexpected, are proceeding with startling rapidity. Hospital attendances in the re-settled areas have outstripped the most sanguine hopes [...] and the success of the treatment given, combined with a vigorous campaign to produce more and better food and to improve sanitation, is having a profound effect not only on the health, but also on the psychology of the community.”*⁶⁸

The past efforts in rural health care had produced a rising number of people *“whose wants will be far more ambitious than the meager requirements of their fathers who were poverty stricken, diseased savages, picturesque in their semi-nudity, no doubt, but a disgrace to modern society.”*⁶⁹ The creation of a committee for postwar planning in Dar es Salaam in 1944 and the prospect for increased funds for development projects invited Culwick to absorb the rising expectations and to propose the more comprehensive ULANGA RURAL DEVELOPMENT SCHEME (URDS) that together with the KILOMBERO VALLEY SCHEME and the REHABILITATION SCHEME FOR THE ULUGURU MOUNTAINS was approved by the DEVELOPMENT COMMISSION FOR THE EASTERN PROVINCE.⁷⁰ Culwick's efforts were not just motivated by his own observations on improved health in the district but more so by a report written by the Education Officer J. A. C. Blumer, who in 1944 visited Ulanga district in order to analyze the performance of different government, mission and N.A. schools.⁷¹ In the first paragraph already, Blumer

68 (TNA), No. 33041, Development and Reconstruction Ulanga District, A. T. Culwick, Memorandum on Education in Ulanga District, 28.08.1944, pp. 1–6, here: p. 1. For similar ideas: A. T. Culwick, The Laborer and his Hire, in: Tanganyika Notes and Records, Vol. 17, June 1944, pp. 26–33.

69 Culwick, Memorandum, p. 1.

70 (TNA), No. 33041, A. McKenzie to the Deputy Chairman of Development Committee, 21.08.1947, p. 1, the “Kilombero Valley Scheme” however never received funds because the proposal was never worked out, see: TANZANIAN NATIONAL LIBRARY (NBA SECTION), F. H. Page-Jones, Annual Reports of the Provincial Commissioners on Native Administration for the year 1948, p. 33.

71 (TNA), No. 33041, J. A. C. Blumer, Inspection Report-Ulanga District, 05.08.1944, pp. 1–5.

admitted that the Ulanga district had been the “*cinderella*” for many years and that his analysis was not intended to overshadow the district officer’s precious efforts “*who have done all in their powers to deal with educational matters with the time and meager funds at their disposal.*”⁷² What then followed was a harsh criticism of the government and N. A. schools that lacked behind missionary-provided education in both physical appearance as well as quality of training. The new political situation created by seven newly-built sleeping sickness settlements, including almost 9000 taxpayers and their rising demands for the promised benefits of closer settlement, required increased efforts on the part of the colonial government.

Hence, education made up the core of Culwick’s development project but, with a focus on agricultural development and animal husbandry, it not only tried to be as inclusive as possible but was also inspired by other major development projects such as those planned in Sukumaland in the Lake Province or the infamous “*groundnut scheme*” in what is Mtwara region today.⁷³ Culwick’s scheme had three major components: held together by a training center preferably placed in Mahenge, it first aimed at going beyond common efforts to improve higher yields through the mechanization of agrarian production but to foster the transformation of natural goods into consumer goods through industrial education. To put it in his own words:

*“We need an army of skilled mechanics, carpenters, boat-builders, cycle repairers, masons, joiners, traders, etc and when I say “need”, I mean that work is actually available for them now, and that the demand for them will grow rapidly provided the conditions are created to foster the economic expansion of this district, not only as an exporting community, but also as one in which internal trade plays a greater and greater part, which it undoubtedly could and should.”*⁷⁴

Secondly, and closely linked to the component of industrial education, was animal husbandry for which cattle had to be shifted from the plains to the Mahenge highlands. Third, it made sense to Culwick to integrate the rural dispensary system into the overarching framework of the scheme. The several dispensaries that emerged within the enclosed spaces of the sleeping sickness concentrations throughout the 1940s were funded by the anti-sleeping sickness measures but with the decreasing number of new infections, the funds for rural health care fizzled out.⁷⁵

72 Ibid., p. 1.

73 Rohland Schuknecht, *British Colonial Development Policy after the Second World War. The Case of Sukumaland*, Tanganyika, Berlin 2010.

74 Culwick, Memorandum, p. 2.

75 (NBA Section), F. H. Page-Jones, *Annual Report for the year 1947*, p. 38.

The proposal that afforded the presence of one European “headmaster”, one European “farm manager”, one European “Industrial Instructor” and couple of African teachers and clerks faced outspoken criticism, stemming from different corners. Unsurprisingly, Paul Alfred Turner Sneath, whose reservations against the material expansion of rural dispensaries have already been mentioned, could not fully support the scheme.⁷⁶ Others too were not enthusiastic about Culwick’s proposal to maintain and expand rural medical services with the help of colonial development funds. One of the latter was Conan-Davis who was about to take over Culwick’s post as District Commissioner in 1945. However, Conan-Davis did not question the unrealistic expectations of therapy, as was Sneath’s cause, but the unrealistic assumptions about the people’s current health status on which Culwick’s proposal was based. Despite all assertions, Conan-Davis could not find any references supporting Culwick’s hypothesis of improved health in the district. According to the future District Commissioner, the N.A. dispensaries were “pathetic in their inadequacies”; the population of the Mahenge highlands on whose shoulders Culwick’s hopes rested were not able to produce grain surpluses but had to be fed by food permits and there was not the slightest indication that “they have learned the first thing about proper feeding and wise cultivation.”⁷⁷ To quote Conan-Davis at full length:

“In his scheme, Mr. C. has let his imagination run riot and it is no more based on reality than is a fairy tale. There are errors, inaccuracies and false conclusions drawn from unproved hypotheses, and no wonder. The originator is neither qualified nor even trained, in veterinary science, dairy farming, medicine, engineering, forestry nor agriculture and has had very little administrative tuition in his more junior days. Frankly, it amazes me that the scheme has been so unconditionally accepted on the sole recommendation of an amateur.”⁷⁸

From today’s perspective, Conan-Davis’ reservations were well justified. From the outset, the scheme had to face major drawbacks that led to a reduction of the approved funds from £97,000 to £47,000 over the period of ten years and a continuation of the scheme on a much lower profile.⁷⁹ This reduction was especially due to the problems that emerged from the animal-husbandry side of the project. As it turned out, the Mahenge highlands were not at all suitable for the settling of cattle herds. In 1945 already, large numbers of cattle died due the presence of East Coast Fever “a disease which was understood not to be

76 (TNA), No. 33041, Sneath to the Deputy Chairman of the Development Committee, 26.08.1947, p. 1.

77 (TNA), No. 33041, Conan-Davis, The Ulanga Rural Development Scheme, 12.12.1945, pp. 1–11, here: p. 2.

78 Ibid., p. 1.

79 (NBA Section), F. H. Page-Jones, Annual Report for the year 1947, p. 42.

*present in the Mahenge plateau.*⁸⁰ At several instances, the presence of tsetse fly has also been reported and after an in-depth survey made by the Veterinary Officer and the Pasture Research Officer, it had been decided to postpone the component also because of a “*lack of suitable grazing land for large scale development.*”⁸¹ Culwick’s plans on the educational sector were also overtaken by reality: instead of establishing a training center for an “*army of mechanics and carpenters*”, the scheme allowed for a boarding school in Nawenge comprising sixty non-Christian boarders. The original intention to challenge the Capuchin mission’s monopoly in education was undermined by the decision to provide the Capuchins with a sum in order to extend their school workshop for the training of a selected number of non-Christian apprentices.⁸² In 1951, however, the whole scheme collapsed altogether. The Nawenge Boarding school was handed over to the Ulanga district’s Native Authorities in 1952, as were the nine sleeping sickness dispensaries each of which was equipped with a microscope, a dresser and an “*ayah*” (female helper). As the URDS report for 1951 stated dryly: “*As far as can be foreseen at present, no development schemes will be operating in Ulanga District during 1952.*”⁸³

The question of why the URDS failed, even according to British standards, is perhaps not as difficult to answer as Conan-Davis’ reverse question of why it was promoted so vigorously, given the many critical voices raised. To start with the first question: one of the most outstanding characteristics the project shared with many others conducted at the time was the lack of cooperation with all those for whom the project was originally designed. Development was something that was done for Africans but not with Africans. Since “*development*” was said to trickle down from Europeans to Africans, such schemes were highly dependent on the presence of European staff whose willingness to sacrifice a career in the colonial bureaucracy in Dar es Salaam for a life in far-away Ulanga had been highly over-estimated. The importance and the impact of career patterns hint on the individual core of such all-encompassing concepts as the “*colonial developmentalist state*” or the rural health system. In fact, health and development in 1930s and 1940s Ulanga were promoted by single individuals, so that it is hardly possible to speak of a “*health system*” at all. Culwick’s replacement through the new District Commissioner Conan-Davis marked a severe blow for the continuation and the support of the URDS.

80 (NBA Section), Annual Report of the Provincial Commissioners for the year 1945, p. 32.

81 (TNA), Microfilm (MF), 21, Ulanga District, Colonial Development Schemes, Ulanga Rural Development Scheme, p. 1.

82 Ibid., p. 2.

83 (TNA), No. 33041, Ulanga Rural Development Scheme, Report for 1951, 14.12.1951, p. 1.

Conan-Davis dismantled Culwick's ideas as a misjudgment of local needs and pointed to major bottlenecks in the planning process. Why then had the project been executed at all? As has been mentioned above, the URDS has to be seen in the wider context of late colonial policies and the rise of concept of rural development. Even though "*development*" never constituted a homogenous discourse that could easily be translated into coherent rural policies, the concept nevertheless demarcated a discursive field which gave rise to a certain set of meanings of what rural development was supposed to be: the standardization of political and administrative processes, the improvement of livelihoods through education and better health care and the rationalization of "*traditional*" agrarian systems through the application of science and technology. Emerging from the sleeping sickness concentration measures, the URDS is a good example of a policy that is path dependent, responsive to the claims of the local populations and impinging on the double requirement of being scientific at its roots and progressive in its outcomes. Culwick, as its major proponent, was especially trustworthy because he successfully marketed his local knowledge about the region as well as his strong belief in the power of science in re-modeling and transforming African societies. It was this combination of local expertise gained from living in the field for almost fifteen years and playing the scientific strings that led to the URDS take off.

SCIENCE AND DECOLONIZATION

This chapter has argued that from the late 1930s onwards decolonization and science entered a stage of mutual co-production.⁸⁴ Policy-makers in Paris and London considered scientific research in the colonies as an important factor in reshaping the increasingly strained relations between the colonies and the metropolises and accepted substantial funding. A rising scientific apparatus and the newly released metropolitan funds for colonial development and research did, however, not result in an all-encompassing "*knowledge machinery*" but created distinctive geographies of accelerated scientific action and social interaction in the colonies. The comparison of the two places that emerged more or less accidentally on the scientific landscape of the French and British empires yields striking differences with regard to the motivation, function, and social impact of the respective scientific project. The major reason behind the creation of ORSTOM and its training center in Adiopodoumé was a better coordination and monitoring of French science in the French colonies. ORSTOM-Adiopodoumé was just one of many newly created ORSTOM sites that were oriented towards Paris within the network of French postwar imperialism. Highly

84 Lachenal, *Biomédecine et décolonisation au Cameroun*, p. 15.

hierarchical in nature, the institute reached out into researching every hidden corner of natural and social life and compiled masses of scientific and statistical data about the colony. Unleashing a social dynamic for the nearby villages, ORSTOM however never had the direct political impact compared to what had been experienced in Ulanga. There, disease prevention formed the basis for wider social and economic policies. The quest for containing the spread of tsetse resulted in large-scale state interventions and the creation of several sleeping sickness concentrations which were heralded as a model case for rural development. Therefore, the position of Tanganyika within the larger project of empire does not say much about the character and the impact of colonial medicine on the local population. Sleeping sickness was considered a good opportunity to change rural African livelihoods and to accelerate the pace towards modernity. The sudden exertion of state power within an area where governance lay in the hands of N.A. or foreign religious organizations was short-lived. The sense of emergency that sleeping sickness interventions entailed could not be translated into sustainable development policies, the reasons for which were local resistance, the lack of funds and mainly the discrepancies within the colonial administration about the general objectives of the settlements. Whereas ORSTOM continued its operation in Côte d'Ivoire after a major reform in the 1960s, British colonialism in Tanganyika crumbled in the 1950s, giving way to new international protagonists among which Switzerland was not the least important.

CHAPTER 2

*Postwar Switzerland
and Sciences for the Colonies,
1940—1950*

SWITZERLAND IN THE WORLD

The previous chapter proposed a reading of science and decolonization as co-productive social forces. Even though with distinct local impact, both colonial France and Britain played the scientific trump card in a further round of the imperial gamble in the 1940s and beyond. The overseas territories were no longer the “*material reserves*” as Raoul Combes insisted. Instead, in a powerful re-interpretation, they became the neglected but potentially cultivatable areas covering the seeds of progress waiting for science to make them flourish. This imperialism of knowledge did not leave Switzerland unaffected. WORLD WAR II provided small niches for Switzerland to appear on the colonial stage. In the Swiss case too, science was the major vehicle used to step out of the enclosed laboratories in Switzerland and to enter the African fields. Thus, in Switzerland as elsewhere, decolonization gave rise to a range of older scientific disciplines and new institutions that were considered suitable for application in the colonies. However, this reconfiguration of science in Switzerland did not go hand in hand with colonial occupation nor with the manifold scientific practices in the colonies. Switzerland had no colonial territory to conquer, and no armies to protect from newly discovered germs. The institutionalization of prospective colonial science in Switzerland was not as much related to colonial conquest as it was to the specific domestic circumstances caused by WORLD WAR II. Colonial science to be and its many institutions were seen as a welcome stepping stone for young Swiss emigrants to leave the country for the colonies and as an effective means of mitigating pressures on the postwar labor market. As paradoxical as it might sound, it was this strong focus on the “*nation*” that accounted for this transnational move.

A first part of the chapter looks at the history of science policy in Switzerland. It concentrates on the historical processes that led to the establishment of the SWISS TROPICAL

INSTITUTE in 1943 and the rise of novel forms of scholarly engagement with tropical environments. The characteristics of colonial science as a conglomerate of already established scientific branches form the center of the second part. Lagging behind more than half a century of colonial scientific “*fieldwork*” compared to their French and British counterparts, colonial science in Switzerland was not yet a grounded scientific discipline but composed of long-established disciplines such as medical parasitology, ethnography, agronomy and medicine. For science to become “*colonial*” in the sense as it was being practiced in the colonies it has to move south. The following section therefore scrutinizes the strategies employed by single Swiss scientists to create for Swiss science a space in the tropics. It looks at how they immersed themselves into the ORSTOM family working in Adiopodoumé and how they finally got what they longed for: a small research laboratory established on the ORSTOM site in 1951 called CENTRE SUISSE DE RECHERCHES SCIENTIFIQUES (CSRS). The fact that colonial societies were not structurally divided up into the social realm of the “*colonizer*” and that of the “*colonized*” but marked by various social hierarchies and “*hybrid*” identities is now a well-established argument in the academic literature.¹ As the last part of the chapter aims to show, due to financial restrictions Swiss scientists could hardly comply with the social obligations a life among Europeans in the colony imposed.

SCIENCE AND THE ECONOMIC POSTWAR ORDER

Until the interwar period, a national science policy was more or less absent in Switzerland. Science was organized locally, and with the exemption of the SWISS FEDERAL INSTITUTE OF TECHNOLOGY (ETH ZURICH) outside the reach of the federal government. Formalized connections between science, industry and the state – a major trigger for the development of science policy elsewhere – were almost non-existent.² The medium through which the federal government first began to support science was the SWISS SOCIETY OF NATURAL SCIENCE (SCHWEIZERISCHE NATURFORSCHENDE GESELLSCHAFT, SNG) the oldest federal scientific organization in Switzerland dating back to 1815.³ However, during the economic recession of the interwar period and notably during WORLD WAR II, the Swiss government became

1 Homi Bhabha, *The Location of Culture*, London 1994, Stoler, *Rethinking Colonial Categories*. *European Communities and the Boundaries of Rule*, in: *Comparative Studies in Society and History*, Vol. 31, No. 1, 1989, pp. 134–161.

2 Frédéric Joye-Cagnard, *La construction de la politique de la science en suisse. Enjeux Scientifiques, stratégiques et politiques (1944–1974)*, Neuchâtel 2010, p. 29.

3 Murray James Luck, *Science in Switzerland*, New York, London 1967, p. 97.

more active in initiating a national science policy as part of wider economic measures.⁴ The government's attempt to control scientific production within Switzerland was triggered by economic considerations. The war years left the country politically isolated and anxious about postwar depression. The fight against possible chronic unemployment as experienced after the last world war became the foremost national priority. In 1940, member of government, Marcel Pilet-Golaz announced in a radio transmission that his government would do everything "*whatever the cost*" to prevent the Swiss labor market from nose-diving.⁵ Applied science controlled by the state and subordinated under the economic primate was considered a crucial instrument in mitigating high unemployment rates. In the early 1940s, Arthur Rohn, president of the Schulrat of the ETH and the Federal Delegate for Employment Opportunities, Johann Laurenz Cagianut, met in order to discuss the idea of a SWISS NATIONAL SCIENCE FOUNDATION (SNSF). The project was biased towards the needs of the ETH and gave the Federal Institute disproportional weight in the foundation board. Not surprisingly, the SNSF met fierce resistance especially from the cantons of Bern, Zurich and Basel who saw the very principle of federalism violated. Additionally, Basel feared a drain of money from the pharmaceutical industry to the new foundation. Arthur Rohn's project therefore failed and it was only in 1952, when physiologist and president of the HIGH ALTITUDE RESEARCH STATION JUNGFRAUJOCH, Alexander von Muralt realized the project of a SNSF which tried to encompass all the scientific disciplines in a non-discriminatory manner. However, the failure of the Rohn-Cagianut project was not detrimental to the basic idea that the applied sciences could substantially fuel the stumbling economic engine. Otto Zipfel, who was named Delegate for Employment Opportunities in spring 1941, started a second attempt in the same direction. Based on the "*Bundesratsbeschluss vom 29. Juli 1942 über die Regelung der Arbeitsbeschaffung in der Kriegskrisenzeit*", in a letter dated 21st October 1942, he motivated all Universities to submit research projects, "*that would generate job opportunities and benefits for the industrial, trade and agricultural sectors or that are suitable to propel export and tourism.*"⁶

4 Antoine Fleury, Frédéric Joye, *Die Anfänge der Forschungspolitik in der Schweiz. Gründungsgeschichte des Schweizerischen Nationalfonds zur Förderung der wissenschaftlichen Forschung 1934–1952*, Baden 2002, p. 26.

5 Quoted in: Erwin Bucher, *Zwischen Bundesrat und General. Schweizer Politik und Armee im Zweiten Weltkrieg*, Zürich 1993, p. 543.

6 Staatsarchiv Basel-Stadt (StABS), Universitätsarchiv I 71.1, (Schweizerisches Tropeninstitut), 1942–1944, Brief Otto Zipfel, 21.10.1942.

THE FOUNDATION OF THE SWISS TROPICAL INSTITUTE (STI) IN 1943

Alfred Gigon, professor for internal medicine at the University of Basel, felt the creation of a STI would well answer Zipfel's request. Although influential in the field of Swiss science policy and – together with Alexander von Muralt – a major motor behind the creation of the SWISS ACADEMY OF MEDICAL SCIENCES in 1943, Gigon was more or less a stranger to the tropical world. Rooted in the tradition of social medicine, Gigon published widely on the relations between medicine and social policy or the nutrition of the working classes.⁷ What then accounts for him making room for tropical spaces in Switzerland? In a recent publication, Andreas Eckert reminded us that the discourse on the tropics and tropicality was added as a new feature during the process of decolonization. Instead of framing the tropical world either as an earthly paradise or the “*white man's burden*” (Rudyard Kipling), the term was more and more imbued by the “*concept of development, global tourism, commodity advertising and environmental politics.*”⁸ However, Gigon did not yet conceptualize tropical spaces as targets for Western development initiatives. In his argumentation about why Switzerland would need a STI, earlier representations of the tropical world as overflowing with natural affluence loomed large.⁹ According to the author, the possibilities deriving from such an institution were manifold and not at all restricted to medical research. In particular, the economic potential of a tropical school fired Gigon's imagination. It sufficed to briefly glimpse at the war-ridden European economies to realize that no salvation for Switzerland could be expected from trade relations with European countries. Instead, while WWII left European economies in tatters, there were whole continents and subcontinents such as Africa, Asia, or Latin America that would now self-confidently claim their stake in the postwar economic and political constellation, outstripping the old continent with regards to political influence and economic wealth.¹⁰ Being a country devoid of any colonial past, Switzerland was well positioned in the race for new markets. But still, re-configurations of global power relations afforded readjustment of domestic economic structures and the STI was a first step in this direction. As Gigon contended: “*A Tropical Institute should mainly fulfill economic and scientific tasks and the latter in the interests of the economy.*”¹¹

7 Alfred Gigon, Etwas über Medizin und Sozialpolitik, in: Sonderabdruck aus der Schweizerischen Medizinischen Wochenschrift, Vol. 75, No. 18, 1945, pp. 394–501, Gigon, Die Arbeiterkost nach Untersuchungen über die Ernährung Basler Arbeiter bei freigewählter Kost, in: Institut für Gewerbehygiene in Frankfurt (ed.), Schriften aus dem Gesamtgebiet der Gewerbehygiene, Heft 3, Berlin 1914.

8 Eckert, “*Tropics*”, in: Akira Iriye and Pierre-Yves Saunier (eds.), Palgrave Dictionary of Transnational History, Basingstoke, London 2009, pp. 1059–1061.

9 (StABS), Universitätsarchiv I 71.1, Gigon, Exposé “*Schweizerisches Institut für tropische Wissenschaften und Wirtschaftsbeziehungen*”, 24.11.1942.

10 Ibid., p. 3.

11 Ibid., Gigon to Zweifel, 10.02.1943.

Today's readers might be amazed about the degree of Gigon's imagination when he came to write about rising Third World economies, especially on the African continent. It has to be acknowledged, however, that his plans complied with political necessities as well as economic realities at the time. The cautious optimism of his sentences encapsulate the specific historical situation when, after the battles of El Alamein and Stalingrad, the course of war took a decisive turn in favor of the Allies. The more the militant pendulum shifted to the Allied forces, the more Switzerland's "neutrality" and its cooperation with Nazi Germany during the war were internationally questioned. The Allies, in particular, accused Switzerland of having sustained the German dictatorship through uninterrupted and intense trade relations. Given the chilly winds blowing from over the Atlantic, political realignment was one of Switzerland's main concerns. As early as 1942, a new division was created within the DEPARTMENT OF FOREIGN AFFAIRS charged with working out strategies of how to best integrate Switzerland into a postwar political system.¹² To smoothly insert itself into a new political order, on the one hand, and to remain competitive in entering new economic markets, on the other, were the foremost priorities. Disregarding imperial powers, already before the outbreak of WWII, Third World markets were more important to Switzerland compared to other small European open economies.¹³ After the war these economic relations were even more pronounced. While in 1938, 13.3% of all exports were traded on Third World markets, this number rose to 22% in the mid-1950s.¹⁴ The intensification of trade relations in the ultimate post-war period was mainly due to Switzerland's status as a neutral country, completely devoid of imperialistic intentions.¹⁵ It has to be noted, however, that with the fast recovery of Europe's postwar economies, Switzerland's major trading partners remained on the old continent. More over considering the "newly emerging markets", there were sharp distinctions as to where Swiss exports were flowing to: thus the Swiss trading network more thoroughly included the markets of Asia and Latin America than this could be claimed for Africa.¹⁶ However, the decision to create an STI in Basel in 1943 cannot be attributed to economic reasoning only. Equally important was Basel's long-established colonial tradition, of which the STI was a further link in the chain.

12 Antoine Fleury, La Suisse et la préparation à l'après-guerre, in: Michel Dumoulin (ed.), Plans des temps de guerre pour l'Europe d'après-guerre, 1940–1947 – Wartime Plans for Postwar Europe 1940–1947, Bruxelles 1995, pp. 175–195, here: p. 176.

13 Etemad, Structure géographique du commerce entre la Suisse et le Tiers Monde au XXe siècle, in: Paul Bairoch and Martin Körner (eds.), Die Schweiz in der Weltwirtschaft – La Suisse dans l'économie mondiale, Zürich 1990, pp. 165–183, here: p. 173.

14 Ibid., p. 174.

15 David, Etemad, L'expansion économique de la Suisse en Outre-mer (xix^e–xx^e siècles). Un état de la question, in: Schweizerische Zeitschrift für Geschichte, Vol. 46, No. 2, 1996, pp. 226–231, here: pp. 227–228.

16 Marc Perrenoud, Guerres, indépendance, neutralité et opportunités. Quelques jalons historiques pour l'analyse des relations économiques de la Suisse avec l'Afrique (des années 1920 aux années 1960), in: Suisse-Afrique (18e-20e siècles). De la traite des Noirs à la fin du régime de l'Apartheid, Münster 2005, pp. 85–104, here: p. 94, see also: Etemad, Le commerce extérieur de la Suisse avec le tiers monde aux xix^e et xx^e siècles. Une perspective comparative internationale, in: Les Annuelles. La Suisse sur la ligne bleue de l'Outre-mer, pp. 19–41, here: p. 32.



General Tropical Course, source: SWISS TROPICAL AND PUBLIC HEALTH INSTITUTE (SWISS TPH)



SWISS TROPICAL INSTITUTE (STI) and the TROPICAL CLINIC SONNENRAIN, source: SWISS TROPICAL AND PUBLIC HEALTH INSTITUTE (SWISS TPH)

AFRICA AS CIVIC LEISURE

It was not completely by accident that Gigon chose Basel as the future site of the STI. Switzerland in general and Basel in particular have a long history of African encounters.¹⁷ Discovering “*exotic*” places, the collection of scientific specimens or ethnographic displays was deeply rooted in Basel’s protestant “*patriciate*.”¹⁸ Like many of the imperial centers in Europe, Basel too witnessed the rise of a distinctive institutional network that organized the exchange and distribution of knowledge about the tropical world in the 19th century. The Basle Mission – founded in 1815 – became an important centre of planning, given that it maintained missionary stations in West Africa, India, China and Indonesia.

Sunday morning jaunts to the tamed wilderness of the zoological gardens or to the ordered displays of the ethnographic and natural history museums were part of a deeply internalized cultural habitus. Inserted between the Godly order of ethnographic objects, marveled at in museums, and the discomfiting “*exoticism*” of the tropics, were the scientific expeditions starting off from Basel in high numbers. Of paramount importance for the development of ethnography as a scientific discipline in Switzerland were the cousins Paul and Fritz Sarasin, who in 1883–86 explored the island of Ceylon (Sri Lanka), meticulously describing the natural characteristic of the island and the “*behavior*” of the Veddas for a wider European public. Later, the Sarasins would venture into Celebes (Sulawesi), accompanied by an armed retinue helping colonialism to expand.¹⁹

The chemical industry too had strong interests in the exploration of foreign territories. As Serge Reubi contends, the tradition that industrials would finance scientific explorations in exchange for testing their products under tropical conditions was well-established.²⁰ Perhaps the most noteworthy feature of the nature of knowledge production on Africa in Basel was that, well into the second half of the 20th century, these initiatives and institutions cannot be considered as singular strands but as knotted together through various interpersonal ties. As we will see later, no one more explicitly personified these connections between the different disciplines than did the zoologist Rudolf Geigy (1902–1995), the first

17 Minder, *La Suisse coloniale*, Patrick Harries, Giorgio Miescher, Immer etwas Neues aus Afrika. Einige Überlegungen zur Geschichte Afrikas in Basel, in: *Regio Basiliensis*, Vol. 45, No. 2, 2004, pp. 87–97.

18 The term “*patriciate*” is borrowed from Philipp Sarasin who defines confined patrician structures as shaped by profession, income property and familial bonds: see: Philipp Sarasin, *Stadt der Bürger. Bürgerliche Macht und städtische Gesellschaft. Basel 1846–1914*, Göttingen 1992 (2nd edition).

19 Zangger, *Koloniale Schweiz*, Schär, *Tropenliebe*.

20 Reubi, *L’ethnologue, prestataire de service pour l’industrie dans la Suisse des années 1930–1960*, in: Hans-Jörg Gilomen, Margrit Müller and Laurent Tissot (eds.), *Dienstleistungen. Expansion und Transformation des “dritten Sektors” (15.–20. Jahrhundert) – Les Services. Essor et transformation du “secteur tertiaire” (15^e–20^e siècles)*, Zürich 2007, pp. 319–327, here: p. 320, Reubi, *Gentlemen, prolétaires et primitifs*.

director of the STI in 1943. Born into a wealthy industrial family, Geigy replaced his father Johann Rudolf Geigy-Schlumberger (1862–1933), as a member of the Board of Governors of the pharmaceuticals J. R. GEIGY AG in 1932. The Geigys belonged to a group of powerful families who shaped the city's cultural and political life. Even though this group's direct political influence on Basel's politics loosened during the interwar period, the social and cultural weight of these families remained intact at least until the 1960s.²¹

Given this rich tradition of close entanglement, the proposition of creating an STI was strongly endorsed by the local academia. Though even before Otto Zipfel got the slightest chance to be inspired by the idea of an STI in Basel, Peter Von der Mühl, vice chancellor of the University of Basel and professor for Greek language and literature, asked all the faculty members to give their reactions to such a proposition.²² In their responses, the ethnographers, geographers, theologians and humanists all pointed to the comprehensive insights about the tropical world that they would candidly share with the members of a future STI.²³ Ironically, more outspoken resistance was uttered by the members of the faculty of economics. In their memorandum the economists made it clear that they would rather support the project of an EXPORTFÖRDERUNGSINSTITUT (Institute for the promotion of exports) initiated by Basel's CHAMBER OF COMMERCE, instead of endorsing a STI.²⁴ It was lucky for the proponents of the latter that such an EXPORTFÖRDERUNGSINSTITUT was already in the process of being created in St. Gallen and supported by the Swiss government.

While all the parties could more or less easily agree that the historic process of decolonization was a good chance for Switzerland to reach out for the tropics, questions about the organizational setup of such an institution were a rich source of disparity. Zipfel and the political decision-makers in Bern interpreted the benefits of an STI mainly in economic terms. Theirs was the wish of the STI having a positive effect on the pressures of a postwar labor market by training a highly productive workforce for a sojourn in the tropics. As a consequence, they intended to finance the whole project through the loans offered by the special program of the *“Arbeitsbeschaffung”* [job creation], which were granted only for five years. Rudolf Geigy, who personified this above-mentioned strong network of business and

21 Sara Janner, Rudolf Geigy (-Heese)-Hunziker (1902–1995), [unpublished typescript], 2010, pp. 1–7, here: p. 2.

22 (StABS), Universitätsarchiv I 71.1, Brief Von der Mühl, 01.12.1942.

23 Ibid., Felix Speiser to Von der Mühl, 02.12.1942, as well as heads of the geographic department, and the deans of the faculty of theology and the faculty of humanities respectively, 04.12.1942, 04.12.1942, 05.12.1942.

24 Schweizerisches Wirtschaftsarchiv (SWA), Institute 196, Brief der nationalökonomischen Fachvertreter to Von der Mühl, 04.12.1942.

scientific interest in Basel, in turn had a long-term engagement in mind. The STI should not only serve short-term economic needs but add a further element to Basel's scholarly tradition with Africa. Thanks to Geigy's pronounced networking skills in Bern, the different parties finally agreed to establish the STI as an institution under public law in 1943 and to divide the financial burden amongst the central government, the cantonal government and private donors.²⁵ Geigy's capability to cater for different institutions in Basel was also palpable in the daily academic activities. Geigy and his scientific fellows of the STI had a broad understanding of the term "*tropics*." Consequently, their new object of investigation should be scrutinized by a variety of different scientific disciplines.

ENCYCLOPEDIA KNOWLEDGE

Tropical science very much owed its stepwise institutionalization to the dedication of Rudolf Geigy, who acted as the STI's first director. In his tasks he was assisted by a board of trustees composed of exponents from politics, academia and private industry. Their function was to supervise the work of the institute, to approve the budget and to define the activities "*which had to comply with economic interests, the provision of jobs and the promotion of exports.*"²⁶

Everyday activities were administered by an Executive Committee made up of former councilor and president of the board of trustees, Adolf Im Hof, as well as Rudolf Geigy, Alfred Gigon and Rudolf Speich from SWISS BANK CORPORATION. At the beginning, the institute's various activities were very much dispersed; the secretary Walter Bodmer had his headquarters at Stapfelberg 7, where he started to collect major publications on tropical issues, which grew into a decent library. Similarly, the staff's teaching activities were mainly held at the main university building at Petersplatz and a TROPICAL SCHOOL was brought under the roof of the CANTONAL SCHOOL OF COMMERCE.²⁷ However, more characteristic than the decentralization of activities was the fact that tropical science was not yet a clearly demarcated "*episteme*". In other words, Switzerland's lack of formalized colonial relations accounted for tropical science being an amorphous body of knowledge. As a consequence of this undisciplined state of tropical science, the STI tried to include as many different

25 (StABS), FD-REG 1d 37.2, (Schweizerisches Tropeninstitut), 1943–1959, Grossratsbeschluss betreffend Errichtung eines Schweizerischen Tropeninstituts in Basel.

26 (StABS), Universitätsarchiv I 71.1, Brief Von der Mühlh to Zipfel, 15.12.1942.

27 The history of the tropical school is currently topic of a MA thesis by Marina Lienhard, "*Weder europamüde noch idealistisch*". Die Ausbildung von Auswandernden an der Schweizerischen Tropenschule, 1944–1981, [working title], University of Zurich 2012 [forthcoming].

disciplines as possible in their research and teaching activities, aiming at an encyclopedic knowledge of the tropical world. This claim of focusing on the “*entire tropical world*” became especially evident in teaching.²⁸ In the fall semester 1943/44, for the first time the STI offered a “*general tropical course*”, designed for people with a general interest in the tropics or, more specifically, for all the missionaries, teachers, traders, nurses who were preparing themselves for a longer commitment under the burning tropical sun.²⁹ Given the heterogeneity of the audience, the topics touched upon in the lectures ranged from anthropology, colonial history and geography to the transmission of infectious tropical diseases.³⁰ However, the audience was not just asked to consume pre-fabricated tropical knowledge but invited to refine their practical skills in drawing and deciphering geographical maps, first aid measures or in various language courses. In the fall semester 1944/45, the organizers were overwhelmed by more than one hundred applications, one third of which came from students or members of the mission societies. In the following years, the highest numbers of participants came from the industrial and trading sectors, as well as the mission societies.³¹ Between 1945 and 1961 the initial rush on the general tropical course tailed off, with annual numbers of registrations settling down at fifty-five on average.

Similar observations about an all-encompassing tropical knowledge can be made when looking at the “*Acta Tropica*,” STI’s own scientific journal. In his preface to the first volume, Geigy reminded his readers that he conceptualized “*tropical science*” as inclusively as possible.³² The articles, many of which were written by Geigy’s students or scientific colleagues working in the colonies, did credit to this approach. The contributions to this journal also represented the tropics from various angles and in various languages. Apart from the notorious articles on natural constituencies or specific disease environments, anthropology and art ranged among the popular topics. For instance, Geigy himself entered the realm of colonial intimacy with an anthropological study about “*Mädchen-Initiationen im Ulanga-Distrikt von Tanganyika*”, co-authored together with Georg Höltker in 1951.³³ Seven years later, art historian Werner Schmalenbach, who earned his doctorate with a publi-

28 (StABS), FD-REG 1d 37.2, Broschüre “*Schweizerisches Tropeninstitut in Basel*”, Basel 1944, p. 17.

29 Later, the STI would add a medical course to the curriculum which was specifically designed to doctors, veterinarians and biologists.

30 (StABS), FD-REG 1d 37.2, Broschüre “*Schweizerisches Tropeninstitut in Basel*”, pp. 26–28.

31 (SWA), Institute 196, Ratschlag 4246, pp. 10–11.

32 Rudolf Geigy, Zum Geleit, in: *Acta Tropica*, Zeitschrift für Tropenwissenschaften und Tropenmedizin, Vol. 1, No. 1, 1944, pp. 1–3, here: p. 1.

33 Geigy, Georg Höltker, *Mädchen-Initiationen im Ulanga-Distrikt von Tanganyika*, in: *Acta Tropica*, Vol. 8, No. 4, 1951, pp. 289–344.

cation about “*Die Kunst der Naturvölker als Anregungsquelle für die europäische Kunst bis 1900*”, contributed “*Grundsätzliches zur primitiven Kunst*” and Thierry Freyvogel, one of Geigy’s Ph.D. students of whom we will hear much more later, provided an intellectual meditation about “*Eine Sammlung geflochtener Matten aus dem Ulanga-District Tanganyikas*.”³⁴ Despite the breadth of tropical knowledge, an inner core of what belongs to the academic field of tropical science started to crystallize.

RUDOLF GEIGY AND A NEW SCIENCE FOR THE COLONIES

It could be convincingly argued that the desire for an all-encompassing representation of the tropics had its origins in the absence of any tradition of tropical science in Switzerland. As we have seen, tropical science was a highly amorphous body of knowledge and open to a variety of different intellectual influences. This state of knowledge was due to Rudolf Geigy who himself by and large defined the contours of the new discipline. Over time, an inner core of sciences for the colonies emerged, mainly comprising the fields of ethnography, zoology (medical parasitology), agronomy and tropical medicine. What they had in common was the quest for application and their suitability for being practiced in the African “*field*.”

Zoology/Medical Parasitology

Of all the four disciplines that constituted the tropical sciences in postwar Switzerland, zoology/medical parasitology had the biggest impact. Starting with Rudolf Geigy, most of the researchers populating the field of tropical science had a zoological background. Against the wish of his father, Johann Rudolf Geigy-Schlumberger, Geigy preferred an academic to a safe industrial career in the J. R. GEIGY AG. After graduating from the prestigious “*Humanistisches Gymnasium*” in Basel, he first studied zoology under Friedrich Zschokke in Basel but later changed to Emile Guyénot in Geneva who familiarized him with physiological questions.³⁵ In 1931, he earned a doctorate in experimental development biology in which he consolidated his international reputation as a skillful experimenter.³⁶ Once back in Basel, Geigy accepted an assignment as a scientific assistant in the department of

34 Werner Schmalenbach, *Grundsätzliches zur primitiven Kunst*, in: *Acta Tropica*, Vol. 15, No. 4, 1958, pp. 289–323, Thierry Freyvogel, *Eine Sammlung geflochtener Matten aus dem Ulanga-Distrikt Tanganyikas*, in: *Acta Tropica*, Vol. 16, No. 4, 1959, pp. 289–301.

35 Janner, Rudolf Geigy (-Heese)-Hunziker, p. 1.

36 Geigy, *Action de l’ultra-violet sur le pole germinal dans l’oeuf de Drosophila melanogaster (Castration et mutabilité)*. Thèse présentée à la faculté des sciences de l’université de Genève pour l’obtention du grade de docteur des sciences naturelles, Genève 1931, see also: Janner, Rudolf Geigy (-Heese)-Hunziker, p. 2.

zoology run by the zoologist Adolf Portmann since 1933. The two scientist's approaches to zoology were rather different. Portmann, whose academic career was sponsored by Geigy's father, had a flair for the philosophical: to him, nature manifested itself in a variety of different forms ("Gestalten") from which insights about relationships and the development of the species could be gained.³⁷ However, natural phenomena could not be deciphered entirely, whatever the degree of methodological sophistication. There always remained an inexplicable rest, a hidden secret nature was unwilling to disclose.³⁸ Rudolf Geigy, in contrast, was more on the experimental side. He worked in the tradition of Wilhelm Roux, who once heralded the scientific experiment as the silver bullet to scientific research. Only with the help of experimentation, so Roux's argument, could nature provide answers to the investigative mind.³⁹ Already during his times as an assistant, Geigy occupied a small research laboratory in the building of the natural history museum at Stapfelberg, which owed its existence to the BASLER STIFTUNG FÜR EXPERIMENTELLE ZOOLOGIE, initiated and financed by his father Johann Rudolf.⁴⁰ In 1935, Geigy got a lectureship in experimental embryology and genetics. Three years later he was awarded a full professorship. Research conditions improved considerably with the creation of the STI in 1943. Geigy cultivated an understanding of zoological research as attached to different research sites: experiments were conducted in the basement of the STI, morphology belonged to the sphere of the zoological institute, systematized and ordered knowledge to the realm of the natural history museum and applied zoology was placed within the boundaries of the chemical industry.⁴¹ Living up to his name, he forged close research collaboration with the "biological laboratory" of the J. R. GEIGY AG created in 1937 and working in the field of pest control.⁴²

37 Christian Simon, *Natur-Geschichte. Das Naturhistorische Museum Basel im 19. und 20. Jahrhundert*, Basel 2009, p. 57.

38 Markus Ritter, *Die Biologie Adolf Portmanns im zeitgenössischen Kontext*, in: *Basler Zeitung für Geschichte und Altertumskunde*, Vol. 100, 2000, pp. 207–254, Joachim Illies, *Das Geheimnis des Lebendigen. Leben und Werk des Biologen Adolf Portmann*, München 1976.

39 Wilhelm Roux, *Die Entwicklungsmechanik der Organismen. Eine anatomische Wissenschaft der Zukunft*, Wien 1890, p. 9, see also: R. Weber, *The Beginnings of Developmental Biology in Swiss Universities*, in: *International Journal of Developmental Biology*, Vol. 46, 2002, pp. 15–22.

40 (StABS), PA 1095, (A), Rudolf Geigy, *Biographisches*, -1995, anonym, Basler Stiftung für experimentelle Zoologie. Bericht aus dem Jahr 1942, p. 1.

41 Simon, *Naturwissenschaft in Basel im 19. und 20. Jahrhundert. Die Philosophisch-Naturwissenschaftliche Fakultät der Universität*, published online 2010, www.unigeschichte.unibas.ch/cms/upload/FaecherUndFakultaeten/Downloads/CSimon_NaturwissenschaftenBasel.pdf (accessed 16.02.2012).

42 Janner, *Rudolf Geigy (-Heese)-Hunziker*, p. 2.

One could rightly argue that the last paragraph somewhat overemphasized Geigy's affection for scientific experiments. In his intellectual universe, nature's manipulation and the humble amazement about nature's diversity (and nature's protection one might add) did not belong to different spheres. What he shared with Portmann was a drive to urge his students out of the lecture halls and to acquaint them with the natural environment. The lesson to be learnt: the laboratory and the field were inextricably intertwined.⁴³ After 1943, germs and vectors of tropical diseases became Geigy's main objects of investigation.⁴⁴ In a creative fashion he dovetailed the study of germs with pathogenic effects on humans and thus pioneered the field of medical zoology in Switzerland.⁴⁵ It is an open question whether or not Geigy conceptualized medicine as an applied discipline of zoology.⁴⁶ More assured, in contrast, is his quest to study tropical diseases within a wider ecological and social disease environment. Consequently, in merging his interest in the natural sciences with his fascination for ethnography, he was intellectually still deeply rooted in the 19th century and probably closer to the research of the Sarasin cousins than to the field of developmental biology.⁴⁷



Rudolf Geigy in Tanganyika 1962, source: SWISS TROPICAL AND PUBLIC HEALTH INSTITUTE (SWISS TPH)

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- 43 Geigy, *Erforschung der Natur im Feld und Laboratorium*, in: *Verhandlungen der Schweizerischen Naturforschenden Gesellschaft (wissenschaftlicher Teil)*, 150. Jahresversammlung in Basel, 1970, pp. 9–20.
- 44 See his volume published together with Adelheid Herbig, *“Erreger und Überträger tropischer Krankheiten”*, Basel 1955.
- 45 Geigy's chair was renamed “*medical zoology*” in 1965.
- 46 Janner, *Rudolf Geigy (-Heese)-Hunziker*, p. 3.
- 47 Simon, *Natur-Geschichte*, p. 69.

Ethnography

Ethnography also contributed substantially to the field of tropical science after 1945. As has been briefly hinted at, collecting ethnographic material was common practice in Basel's civic culture. Private ethnographic collections had a high symbolic value for they shed light on the worldly wisdom of their tenants. Much of the anthropological effort was born out of a conservationist mood: modernity was no longer the privilege of the West but anchored in the harbors of Africa and Asia. Due to increased contact between "civilized" and "uncivilized" cultures the latter are constantly running the risk of diminishing. The ethnographic collection of photographs still kept at the STI today are tagged "*L'Afrique qui disparaît*" (Africa disappearing) and Fritz Sarasin introduced his book on Melanesia as a memorial for "one of the many populations of the Pacific Ocean steadily dwindling in the encounter with the European culture."⁴⁸

Geigy shared a strong fascination for ethnographic displays with many of his peers. In his early research as director of the STI, the natural sciences and ethnography converged. Geigy studied ethnography as a minor at university and closely followed the expeditions of the Sarasins, devouring their publications. In a letter to Fritz Sarasin he confessed:

"Dear friend

It was a special pleasure to receive your wonderful gift [the publication of the results of the Sarasin's research expedition in Ceylon, LM] that you have kindly handed over to me [...] You have known for a long time how much I am interested in your research and the stunning insights gained from your expeditions in foreign countries. You are equally aware how much I am taken with ethnography, something that prompted me to myself start touring the world. You cannot imagine the joy I felt whilst following your tracks in Colombo and hearing Swiss and German expatriates still talk about your stay there and to recognize the general interest in your work on this magnificent island and its inhabitants of older and recent times."⁴⁹

48 (StABS), PA 212a, T2, Sarasinisches Familienarchiv, XLIV 92, Fritz Sarasin, Aus einem glücklichen Leben. Biographische Notizen von Fritz Sarasin, 1941.

49 (StABS), PA 212a, T2, 28–28a, Rudolf Geigy, 1936, Rudolf Geigy to Fritz Sarasin, 27.09.1939, p. 1.

Ethnographic knowledge circulated within Basel's high society; it was shared in the form of gifts and was very much part of people's mental luggage while visiting exotic places. Touring the world, it was a matter of course that the zoologist Geigy followed in the famous anthropologist's footsteps. In 1960 Geigy replaced entomologist Eduard Handschin as a member of the COMMISSION OF THE ETHNOGRAPHIC MUSEUM (Museum für Völkerkunde).⁵⁰ Just like the zoological garden, the museum too profited from his generosity in financing the acquisition of ethnographic collections that would have been unattainable otherwise. His politics of patronage reveal the attempt to shift the ethnographic focus traditionally geared towards South-East Asia and Oceania towards Africa. His zoological students from the 1950s onwards, mainly working in Côte d'Ivoire and Tanzania, constantly purchased ethnographic objects and assured a steady flow of these items from Africa to the ethnographic museum in Basel.⁵¹

Agronomy and its Technological Fixes

Featuring prominently in the wider assemblage of institutions, discourses and practices of tropical science was the previously mentioned tropical school, also established in 1943. More than any other inventions at the time, the school absorbed pressures from the labor market and met Geigy's zeal for applied science. Organizationally independent from the STI – however closely scrutinized – it offered specialist courses for a younger public without previous professional qualifications. Young people who are up for "*self-fulfillment*" and ready to set up their own business elsewhere than in Switzerland.⁵² As a general preparation for living abroad, the curriculum started with a two-year introduction into the tropical world. Following this, the students could enroll in either a "*sugar course*", a "*planter's course*" or a "*trading course*."⁵³ The training at the tropical school was geared towards ambitious aims. At the end of their education, the students should have been able to manage a tropical plantation, a sugar factory or earn a decent living in the offices of a shipping company, a bank or in private industry.⁵⁴ Teachers did not restrict themselves to conveying life-enhancing

50 (StABS), ED-REG 42a, 2–2-6 (10), Rudolf Geigy, 1960–1972, Ernst Staehelin to Rudolf Geigy, 04.02.1960, p. 1.

51 Archiv Museum der Kulturen Basel (AMKB), Museumskommission, Protokolle 1960–1964, R. Wildhaber, Kommission des Museums für Völkerkunde und Schweizerischen Museums für Volkskunde, Basel, Protokoll der Sitzung vom 17. November 1961, pp. 1–2, here: p. 1.

52 Interview with the president of the VEREIN EHEMALIGER SCHÜLER TROPISCHER LANDWIRTSCHAFT (VESTI), Peter Betsche, 13.10.2006.

53 Over the years, the curriculum has been modified several times. So for instance was the training period shortened, the sugar and planter's course offered as one single course and the trading course cancelled at all.

54 (SWA), Institute 196, Tropenschule des Schweizerischen Tropeninstituts in Basel, p. 32, (StABS), Universitätsarchiv I 71.1, Frederik A. Rohn, Zur Gründung einer Schweizerischen Tropenschule, p. 1.

knowledge about the tropics but boosted their networking skills to find suitable jobs for their students. Of the almost one hundred students who graduated in the period between 1944 and 1951, forty entered labor markets overseas as plantation assistants. Africa got the largest stake, witnessing the arrival of twenty-three Swiss planters. Within Africa, the trust territory of Tanganyika won the race of harboring most of the students, followed by Morocco, Libya, Kenya, the Gold Coast, Algeria and South Africa.⁵⁵ Even though not necessarily employed by a Swiss company, their new tasks were considered a success because it at least strengthened Switzerland's trade relations to the European colonial powers.

Consciously or not, by contracting to plantation companies, Swiss emigrants became part of the economic system of colonial domination of which the “*plantation*” still today is the very metaphor. Using the example of Tanganyika, the first chapter has attempted to show that WORLD WAR II gave rise to a novel form of “*welfare imperialism*” and fanciful ideas about modernizing African agricultural systems and increasing food production. This context was very much echoed by some of the Swiss planters who became fierce advocates of changing “*backward African minds*” in order for modernity to set in.⁵⁶ However, the transformations unleashed by WORLD WAR II were not just driven by a vague modernist state of mind but by the wider application of concrete technological fixes, successfully marketed since the interwar period. The one that more than others came to embody the techno-centric approaches towards public health and the environment during WORLD WAR II and after was a product released by the J. R. GEIGY AG that bore the cryptic name: dichloro-diphenyl-trichloro-ethane (short: DDT).

Pest control

There is hardly any other product that symbolizes the transformations of WORLD WAR II and its consequences on the postwar agricultural and health sectors more clearly than the advent of DDT.⁵⁷ DDT was cheap, could be applied extensively and glossed over contexts of poverty. Already during the interwar period, research on pesticide in Switzerland expanded considerably through the extension of pest control from small viniculture to larger cultivation areas, as well as the growing importance of applied entomology in science and industry. On the eve of WORLD WAR II, insecticide research entered a new dimension when Paul Müller working for the J. R. GEIGY AG identified the insecticidal properties of DDT while

55 (StABS), FD-REG 1d 37.2, Geigy, Bericht zu Handen des Vorstehers des EDI, 1951, pp. 15–16.

56 (StABS), ED-REG 1c 190–2-5 (1), Schweizerische Tropenschule, 1943–1964, Bericht über das Schuljahr 1957/58, 22.10.1958, p. 7.

57 Sunil S. Amrith, *Decolonizing International Health. India and Southeast Asia, 1930–65*, New York 2006.

searching for a chemical compound to kill moths in clothing. As it turned out, DDT had the decisive advantage vis-à-vis conventional products (and the decisive disadvantage vis-à-vis nature as became evident later) in that it was effective against insects and pests until three months after the first application.⁵⁸ Three years after the “discovery” of DDT, the J. R. GEIGY AG marketed the product under the label “Gesarol” and “Neocid.”⁵⁹ The “atomic bomb of the insect world” as DDT has belligerently been called, became a decisive weapon in world warfare.⁶⁰ The J. R. GEIGY AG offered DDT both to the United States and Nazi Germany. While mainly used as a plant protectant in Germany, DDT was a crucial tool in fighting malaria in the pacific theatre for the United States.⁶¹ Neither did the application of DDT collapse during times of peace. After the war it conquered the wardrobes of many households as a commodity product continuing to leave its mark on noxious insects in everyday domestic struggles.

When in 1944 GEIGY AG named Robert Wiesmann head of the DIVISION OF INSECTICIDE RESEARCH (Abteilung Schädlingbekämpfung), the company stood at its zenith as far as the sales of this product line was concerned. Wiesmann was one of the key actors in the “discovery” of the insecticidal properties of DDT and spurred the development of new chemical devices in pest control.⁶² At the GEIGY AG, Wiesmann assisted the work of the young entomologist René Wyniger, who was about to change from the BIOLOGICAL LABORATORY to Wiesmann’s research group in 1944.⁶³ As a technical assistant, Wyniger laid the foundations for future research in assembling large collections of insects. Both men closely collaborated with Rudolf Geigy and the STI. As a vice-president of J. R. GEIGY AG, Wiesmann not just shaped the overall course of the company with Rudolf Geigy, together with Wyniger he frequently taught applied entomology at the STI and the tropical school.⁶⁴ On several occasions Wyniger in particular took the students out of the lecture theatres, trying to convince them about the advantages of chemical pest control. In October 1959 the entomologist departed for East Africa to study large production areas battered by the work of various pests. It was sad for him to realize that many of the Western plantation owners

58 Margaret Humphreys, Kicking a Dying Dog. DDT and the Demise of Malaria in the American South, 1942–1950, in: *Isis*, Vol. 87, No. 1, 1996, pp. 1–17, here: p. 11.

59 Simon, DDT. Kulturgeschichte einer chemischen Verbindung, Basel 1999, p. 173.

60 Humphreys, Kicking a Dying Dog, p. 12.

61 Lukas Straumann, Nützliche Schädlinge. Angewandte Entomologie, chemische Industrie und Landwirtschaftspolitik in der Schweiz 1874–1952, Zürich 2005, p. 206.

62 René Wyniger, Dr. Dr. h.c. Robert Wiesmann, in: *Mitteilungen der Entomologischen Gesellschaft Basel*, 22. Jahrgang 1972, pp. 69–70.

63 In Memoriam Dr. h.c. René Wyniger, 1921–2006, in: *Mitteilungen der Entomologischen Gesellschaft Basel*, Vol. 56, No. 4, 2006, pp. 178–188, here: p. 179.

64 Schweizerisches Tropeninstitut in Basel, 1. Jahresbericht 1944, p. 7.

protected their crops through chemical means but that Africans were not yet convinced enough to follow the Western model.⁶⁵ According to him, instructing African farmers in the application of chemicals and in acquiring higher yields was one of the more important duties of the tropical school graduates now working in the African field.⁶⁶ DDT did not just revolutionize the world's agricultural sectors. It became an important technological tool for the rising field of postwar international health.

Tropical Medicine, DDT, and Postwar International Health

Chapter one unraveled some of the dreams of a modern African society dreamt by colonial officials such as Culwick and others. Leaving no chance for trypanosomiasis to spread, Culwick was a fierce advocate of the resettlement schemes from where more general patterns of socio-economic development would derive. In this colonial logic, eradication of disease was never aspired. Instead, the intervention into the fabric of society was a means to satisfy Western ideas of a modern society, more easily controllable by a bureaucratic apparatus. Despite the changes brought about by WORLD WAR II, postwar international health showed many signs of continuation from the colonial past. Apart from the belief that interventions could easily be replicated in various different settings, the military-nature of the intervention or a notorious neglect of local knowledge, it was the strong linkage between health and development that prevailed in the postwar period. This linkage was nowhere more pronounced than in the case of malaria.⁶⁷ Stimulated by successfully wiping out smallpox disease and animated by a deeply grounded faith in Western technology, the decision-makers based at the international organizations in Geneva, Paris or New York thought the eradication of malaria to be feasible. This time, not third-world populations but the *Anopheles* vectors were their prime targets. In 1947, the ROCKEFELLER HEALTH FOUNDATION embarked on a large-scale malaria eradication campaign using DDT on the island of

65 Wyniger, Aus dem Tagebuch eines Entomologen, in: Mitteilungsblatt der Tropenschule des Schweizerischen Tropeninstituts in Basel, No. 7, Basel 1959, p. 13.

66 Ibid., p. 16. It has to be noted however that the widespread application of DDT also called its critics into action. In the context of Switzerland's infamous "war on chafers" (*Maikäferkriege*) and long before Rachel Carson's "silent spring" would arouse general indignation rendering DDT a "*materia non grata*". The first entomologist occupying a chair in zoology, Eduard Handschin, hinted at the technology's detrimental effects for the environment. Not so much the chafers, Handschin claimed, but the new technology itself dangerously destabilized ecology's fragile balance.

67 Randall Packard, Visions of Postwar Health and Development and Their Impact on Public Health Interventions in the Developing World, in: Frederick Cooper and Randall M. Packard (eds.), *International Development and the Social Sciences*, pp. 93–115, here: p. 103.

Sardinia.⁶⁸ While the ultimate aim of eradicating *Anopheles labranchiae* was not achieved, the intervention led to a reduction of malaria transmission and was therefore interpreted as a success story.⁶⁹ In 1955 the WHO, which had taken over responsibility for the global anti-malaria campaigns from the ROCKEFELLER FOUNDATION, launched an ambitious malaria eradication campaign. Though the effort achieved some successes, malaria morbidity and mortality reached almost pre-eradication levels in many of the tropical territories where eradication has been attempted.⁷⁰

Even though the GEIGY AG had a large stake in DDT's global triumph, the STI's approach towards international health was not so much technology-driven as one would possibly expect. The STI had neither the logistics nor the network that would have allowed for a large-scale application of DDT in tropical countries. Instead, tropical medicine as it emerged in Switzerland after the watershed of WORLD WAR II was by and large a clinical practice born by overrated anxieties that tropical diseases could re-emerge in Switzerland again.

Resurging Plagues

While anthropological research was motivated by documenting foreign cultures from extinction abroad, tropical medicine drew its legitimation from preventing tropical diseases from re-emerging at home. WORLD WAR II was not just a catalyst for medical research and technology but nurtured the people's feelings of living in an interdependent world.⁷¹ In his arguments in favor of the STI, Gigon considered emigrants from Switzerland to the tropics much like colonial servicemen and soldiers returning back from hot climates. The major issue about regained mobility was that border-crossings were not the privilege of humans only. Carried along were invisible pathogens accountable for the outbreak of tropical diseases in moderate climates if not observed diligently. These anxieties, early signs of what Nicholas King would aptly call an "*emerging disease worldview*", later were not entirely unjustified.⁷²

68 Peter J. Brown, Failure-As-Success. Multiple Meanings of Eradication in the Rockefeller Foundation Sardinia Project, 1946–1951, in: *Parassitologia*, Vol. 40, No. 1–2, 1998, pp. 117–130, Brown, Malaria, Miseria, and Underpopulation in Sardinia: the "*Malaria Blocks Development*" Cultural Model, in: *Medical Anthropology*, Vol. 17, No. 3, 1997, pp. 239–254.

69 *Ibid.*, p. 240.

70 Packard, Malaria Dreams. Visions of Health and Development in the Third World, in: *Medical Anthropology*, Vol. 17, 1997, pp. 279–296, here: p. 280, Packard, *The Making of a Tropical Disease. A Short History of Malaria*, Baltimore 2007, p. 159.

71 Mark Lauterburg-Bonjour, "*Gedanken über das Studium der Tropenmedizin in der Schweiz*", in: *Schweizerische Ärztezeitung für Standesfragen*, Vol. 28, No. 1, 1947, pp. 2–3.

72 Nicholas B. King, Security, Disease, Commerce. Ideologies of Postcolonial Global Health, in: *Social Studies of Science*, Vol. 32, No. 5–6, 2002, pp. 763–789, Laurie Garrett, *The Coming Plague. Newly Emerging Diseases in a World Out of Balance*, New York 1994.

Italy was too close to Switzerland on the world map as not to share the burden of malaria with its neighbor. For the first half of the 19th century and before the accompanying success of the germ theory, parasitologist Bruno Galli-Valerio highlighted several regions all over the country he assumed to be breeding sites for *Anopheles maculipennis* and *Anopheles bifurcatus* respectively.⁷³ During the course of the 19th and 20th centuries, malaria had been wiped out, the reason for which he saw in the increase of animal husbandry and the mosquitoes' shifting preference from humans to animals, as well as large-scale sanitation measures. Already during the late 18th century, the major sanitation work on the Linth plain (Linthebene) had been justified by pointing to the various health hazards arising from the numerous swamps.⁷⁴ As historian Daniel Speich observed, the advocates of taming the Linth's waters claimed "civilization" to be on their side, while they represented the unruly swamps as symptoms for the moral decay of human society.⁷⁵ One easily encounters this binary rhetorical figure of "high moral standards = lack of disease" and vice versa during WORLD WAR II, with one major difference: This time, the "moral decay – disease complex" was threatening the Swiss population not from within society but from beyond the nation's borders. Investigating the possibility of a re-emergence of malaria in Switzerland, one of Galli-Valerios' students and collaborator of the STI, Hans Gaschen, declared:

*"We have seen now the reasons for the retreat of malaria that formally also existed in Switzerland and the surrounding countries. Could it re-appear? Yes, and it is easy to prove. The authors agree unanimously that [...] the improvement of living conditions, in one word, general wellbeing, is the prime factor for malaria to disappear."*⁷⁶

Gaschen's recourse on the "improvement of living conditions" as the determining factor for health and disease is as important against the backdrop of the overall history of malaria, by and large dominated by vector-control in the postwar years, as it was a catchy notion for a contemporary audience: since the war curbed the general level of wellbeing, it

73 He explicitly mentions the cantons Geneva, Vaud, Valais, Neuchâtel, the region around Basel, the Rhine Valley, St. Gallen, the Linth plain, Einsiedeln, the region around Thun, Interlaken, Brienz, around Alpnach and Flüelen, the Magadino plain and the Tessin and Maggia-Valleys, see: Rudolf Geigy, *Malaria in der Schweiz*, in: *Acta Tropica*, Vol. 2, No. 1, 1945, pp. 1–16, here: p. 2.

74 Daniel Speich, *Helvetische Meliorationen. Die Neuordnung der gesellschaftlichen Naturverhältnisse an der Linth (1783–1823)*, Zürich 2003, especially part II, chapter 2.

75 *Ibid.*, p. 152.

76 Hans Gaschen, *Moustiques et paludisme dans le canton de Vaud à l'heure actuelle*, in: *Bulletin de la Société Vaudoise des Sciences Naturelles*, Vol. 62, No. 262, pp. 379–390, here: p. 389, The possibilities of malaria re-conquering Switzerland were already discussed in the years after WORLD WAR I, see: Gustave Regamey, *Études relatives à la malaria. La distribution des Anophèles dans le Canton de Genève en relation avec les anciens foyers de malaria*, Thèse faculté des sciences, Lausanne 1927, pp. 5–6.

created a space for malaria to sneak back in again. Such a scenario was formulated against the backdrop of a specific historical incidence. At the end of the war, a group of Italian and Yugoslav refugees entered Switzerland's neutral terrain. The former soldiers deserted from their armies and were unlucky to have had contracted the disease during their long odyssey.⁷⁷ As a precautionary measure, the EIDGENÖSSISCHES KOMMISSARIAT FÜR INTERNIERUNG UND HOSPITALISIERUNG asked Rudolf Geigy and his staff to examine the infected and to offer solutions for low-risk detention. In an improvised compound on the site of the Hilfsspital, the two malariologists André Perret-Gentil and Mark Lauterburg-Bonjour prescribed a therapy consisting of cold baths as well as milk and quinine injections.⁷⁸ They were supported by the pharmaceutical companies HOFFMANN-LA ROCHE and SANDOZ, who provided "*Vitaquinin*" and "*Calgluquine*" tablets empirically weighed against each other.⁷⁹

In the ultimate post-war years, the STI worked towards a professionalization of tropical medicine in Switzerland. In acquiring the private clinic "*Sonnenrain*" – rented out to the STI – the cantonal authorities created space for tropical medicine to be competitive with similar institutions working in the field.⁸⁰ Shortly after, the STI moved into the "*Haus zur Föhre*" next to the "*Sonnenrain*", which accommodated the institute's research laboratories, breeding spaces for insects, a lecture hall, a library as well as the administration.⁸¹ However, it takes more than an institution to make a scientific discipline. It was felt that competitiveness in tropical medicine derived not just from high quality but equally from symbolic capital. In this latter respect, Swiss tropical physicians were not so well endowed. Take as two examples the above-mentioned Lauterburg-Bonjour and Hermann Mooser. The physician Lauterburg-Bonjour was one of the early players on the field of tropical medicine. Entering Albert Schweitzer's famous hospital in Lambarene (Gabon) in 1925, he gained first-hand experience about tropical health problems. Back in Switzerland, he shared his medical expertise with the upcoming STI and within the SWISS SOCIETY FOR TROPICAL MEDICINE (founded in 1943) that he presided from 1954 to 1966. Hermann Mooser's career featured similar traits: Mooser studied medicine in Zurich and Lausanne. After graduation and a period as assistant at the University of Basel, in 1924 he moved to Mexico where he headed up the chemical-medical as well as the serological-bacteriological laboratory of the

77 (StABS), FD-REG 1d 37.2, Vorschlag des Geschäftsausschusses zur Weiterführung des Schweizerischen Tropeninstituts, 06.05.1946, p. 11.

78 André Perret-Gentil, L'observation des réfugiés malariens dans la section clinique et le laboratoire de l'Institut Tropical Suisse, in: *Acta Tropica*, Vol. 2, No. 1, 1945, pp. 97–121, here: p. 104.

79 *Ibid.*, p. 118.

80 (SWA), *Institute* 196, Ratschlag 4246, p. 45.

81 Schweizerisches Tropeninstitut in Basel, 4. Jahresbericht 1947, p. 2.

American Hospital.⁸² His publications on the Mexican typhus fever became a preferable topic for scientific conversation. Mooser offered the opinion that there existed a Mexican form of typhus fever (“*murine*” typhus fever whose pathogen would later be called “*Rickettsia mooseri*”) that differed from the European typhus in that it was transmitted by rat fleas and not by body lice as argued for the European case. Disdaining the possibility of humans as a reservoir of the disease, Mooser assumed the classic typhus to be of murine origins.⁸³ In 1936 Mooser became professor of hygiene and bacteriology at the University of Zurich. After the creation of the STI, he closely collaborated with Rudolf Geigy. In 1954 he would accompany him on an expedition to Tanganyika where the scientists would investigate the epidemiology of African relapsing fever.

These two men might have contributed substantially to the field of tropical medicine in Switzerland or elsewhere. What they lacked, however, was the reputation of being the very type of “*tropical doctor*”, as had emerged in colonial France or Britain. Geigy believed that if the STI wanted to expand its efforts in the field of tropical medicine, then the tropical clinic had to be led by a personality whose renommée was not only uncontested but who was deeply rooted within an administrative colonial African network. In Médecin-Général Adolphe Sicé, he might have found what he was looking for. Born in Martinique in 1885, Sicé graduated from the ÉCOLE DE SANTÉ NAVALE in Bordeaux in 1910. During WORLD WAR I he served as a military physician in Morocco. The interwar period saw Sicé appearing at several different places in Africa, where he found rich material for the study of tropical diseases; Haute-Sanga (Central African Republic), Gabon and Madagascar just to mention a few. In 1927 Sicé became director of the INSTITUT PASTEUR in Brazzaville where he experimented with new methods of containing the spread of human trypanosomiasis, a tropical scourge which Geigy too became very fond of. Sicé argued that only through lumbal punctures and the examination of the liquor, could the presence of the disease be ultimately verified. In Congo-Brazzaville, this form of painful diagnostic was so widespread that at the beginning of the 20th century, the verb “*to lumbal puncture*” entered the vocabulary of the local population.⁸⁴ Sicé himself conducted over 10’000 of these operations.⁸⁵

82 Ernst Wiesmann, Hermann Mooser 1891–1971, in: Verhandlungen der Schweizerischen Naturforschenden Gesellschaft (wissenschaftlicher Teil), 152. Jahresversammlung in Luzern, 1972, pp. 322–324, here: p. 322.

83 Hermann Mooser, Die Beziehungen des murinen Fleckfiebers zum klassischen Fleckfieber, in: Acta Tropica (Supplementum 4), Basel 1945.

84 Hunt, A Colonial Lexicon, p. 93, for a detailed account of the several colonial practices to contain sleeping sickness, see: Lyons, The Colonial Disease.

85 (StABS), Universitätsarchiv X 3.5 158, Adolphe Sicé, 1946–1957, Alfred Gigon, Bericht über die Persönlichkeit und die wissenschaftliche Tätigkeit des Médecin Général Sicé, 03.01.1946, pp. 1–5, here: p. 1.

Geigy managed to convince Sicé to follow the call to Basel and to accept the chair as the first full professor for tropical medicine at the university. This appointment was welcomed by the medical faculty in Basel, as it did not go uncommented by the Swiss expat community living in French overseas territories. In particular, voices from within Swiss commercial circles expected an improvement in Swiss-French relations and more favorable sales figures. Jules Wanner head of a family-owned Swiss import-export business in Douala (Cameroon) enthusiastically wrote to Basel:

“Generally there was not just a deep satisfaction about Sicé’s good reception at the STI. Moreover, one also expects a wider French recognition of Swiss emigrants living in Africa and therefore an improvement in business opportunities. General Sicé is much esteemed in government circles in Africa and, as I was able to witness several times, the honors bestowed by Switzerland and especially Basel were very well received.”⁸⁶

However, even with a man of such dazzling colonial credentials as Sicé, tropical medicine in Switzerland waned before it really had the chance to take off. Sicé accepted his position as professor of the university but had to renounce the post of director of the tropical clinic due to obscure personal animosities with Geigy. However, the problems the tropical clinic had to cope with had less to do with whether or not it had an experienced practitioner at its head than with the structural problems of tropical medicine in the immediate post-war years. While between 1945 and 1947, the accommodation capacity rose from 184 to 246, the number of patients plummeted to 60 in 1950.⁸⁷ In 1957, the STI decided to abandon the “*Sonnenrain*” and to integrate the medical services (vaccination, consultations, examinations) into the factual STI.⁸⁸

In summary, one could probably dare to state that during WORLD WAR II and after, tropical science in Switzerland was not yet an established scientific field but consisted of a heterogeneous body of different scientific branches and scholarly traditions. Tropical science was dominated by Rudolf Geigy, who as a key actor juggled various sub-disciplines and rendered the field open to economic influences. One major reason for this heterogeneity of tropical sciences might have to be seen in the absence of a Swiss colonial history. In contrast to European colonial powers, where scientific practices in the colonies increasingly substantiated the growing body of colonial science, there was not such development in Switzerland. Even though informed by the insights of the germ theory, there was neither

86 (StABS), ED-REG 1a 1 1266, Sicé, Prof. Dr. Adolphe, – 1964, Jules Wanner to Adolf Im Hof, 18.02.1947, pp. 1–3, here: p. 1.

87 See the statistics in the annual reports, 1945–1950.

88 (StABS), FD-REG 1d 37.2, Protokoll der Kuratoriumssitzung vom 20.03.1959, p. 3.

an intellectual superstructure nor a set of methodologies agreed upon which would have controlled such a discipline. Tropical science in Switzerland was a field of action and a set of practices geared towards application. It was circled around the experiment (medical parasitology), collections (ethnography), pest control (agronomy) and clinical practices (tropical medicine). What tropical science in Switzerland shared with its French, British and Portuguese cousins was that it tended to leave the narrowly perceived confinements of the “*nation*”, extending its field of action to the tropics.

SCIENCE ON THE MOVE

From early on, the STI operated within an imperial network. Geigy skillfully forged connections to other tropical institutes working in the vast European empires or added secular tones to the chorus of the gospel spread by the Basel Mission. However, the mission’s various African outposts offered a precarious shelter for the STI to live in permanently. Albeit part of the overall civilizing mission, scientific reason and Christian conversion were not easily reconciled. As one of the missionaries declared:

*“The Basel Mission understands that by delegating physicians and researchers to the tropics, the STI likes to use the mission outposts. However, it cannot be disregarded that while the mission does comply with the institute’s humanitarian aspirations, it has reservations about its economic zeal. Therefore, the mission society has to distance itself from the institute’s activities to some degree.”*⁸⁹

Rather than being dependent on the goodwill of the missionaries only, Geigy and the STI were keen to get in touch with the scientific institutions working in Africa. In 1945, Geigy, his wife Nina Geigy, Hans Gaschen and the pathologist Frédéric Roulet boarded a US military aircraft, crossed the Mediterranean Sea and headed towards French Equatorial Africa. Their departure was inspired by philanthropic reasons, as much as it was imbued with colonial thinking: two phenomena which would best be conceptualized as two sides of the same coin rather than to be mutually exclusive.⁹⁰ The journey served to introduce the new institute to the “*colonial scientific authorities*” on the one hand and to investigate the possibility of whether or not parasite-infested European colonialists could be hospitalized

89 (StABS), Universitätsarchiv I 71.1, Protokoll des Initiativkomitees vom 12.11.1943, pp. 6–7.

90 Albert Wirz, Die humanitäre Schweiz im Spannungsfeld zwischen Philanthropie und Kolonialismus. Gustave Moynier, Afrika und das IKRK, in: *Traverse*, No. 2, 1998, pp. 95–110, here: p. 96.

in Basel.⁹¹ On a symbolical level, the expedition resembled previous attempts to scientifically explore the African continent. In Dakar, where the expedition first stopped, the scientists lodged in the “*European quarter*.” In Accra, the capital of today’s Ghana, Geigy and his fellow scientists celebrated the Swiss national day with one of the biggest Swiss expat communities in Africa. Later, William Preiswerk-Tissot, a member of the UNION TRADING COMPANY (UTC) and member of the STI’s board of trustees, would familiarize them with the country’s “*customs*” and the activities of the UTC.⁹²

Yet, in Léopoldville, the expedition came to its first scientific point of culmination. The burgeoning city, economic center of the Belgian Congo, turned out to be the veritable scientific Eldorado. Officially welcomed by General Governor Pierre Ryckmans, Geigy and his entourage occupied a laboratory space in the institute REINE ASTRID from where they started their daily search for scientific specimens. Frédéric Roulet was usually to be encountered in the “*native’s hospital*” “*in order to see interesting cases of tropical and other diseases and to conduct autopsies.*”⁹³ Geigy and Gaschen in turn toured the city’s “*native quarters*” in order to “*collect parasites and germs that transmit tropical scourges.*”⁹⁴

Just a river cruise away from Léopoldville was Brazzaville, capital of French Equatorial Africa (AEF). There too, nothing disturbed the STI’s first scientific contacts with colonized territory. Brazzaville miraculously replicated the experiences made in Léopoldville: Hospitality expressed by colonial governors, official receptions, piling up masses of scientific material instead of extensive medical research. Among items collected, a number of tsetse flies (*Glossina palpalis*) proved to be the most valuable. Surviving the transport to Basel, they surprisingly continued reproducing in the basement of the STI, providing the scientific raw material for the institute’s research on trypanosomiasis.⁹⁵ After a detour to Schweitzer’s hospital in Lambarene, Geigy and his scientific colleagues returned to Basel satisfied with what they had experienced. However, the many recollections of the journey rendered the issue of their own field laboratory even more pressing than before.

91 Geigy, L’expédition scientifique de l’Institut Tropical Suisse en Afrique Equatoriale, in: La Revue Coloniale Belge, Vol. 6, 1946, pp. 10–12, here: p. 10.

92 (StABS), PD-REG 1a, 1969–471 (Schweizerisches Tropeninstitut), 1945–1958, Geigy, Bericht über die wissenschaftliche Expedition des Schweizerischen Tropeninstituts nach Äquatorial-Afrika, p. 3.

93 Geigy, l’expédition scientifique, p. 10.

94 Ibid.

95 Geigy, Élevage de *Glossina palpalis*, in: Acta Tropica, Vol. 5, No. 1, 1948, pp. 201–218.

Colonial Ties

In 1947, the wish to stop the expedition character of Swiss tropical research in Africa finally materialized. Aware of the French plans in Adiopodoumé, Rudolf Geigy, Jean-Georges Baer, professor of zoology at the University of Neuchâtel and Claude Favarger, botanist at the same university, found their way to Paris to carry on negotiations about the creation of a Swiss research laboratory on the large ORSC compound.⁹⁶ The Swiss scientists would probably not have been as resolute if the bonds between the two scientific communities had not been so close. Jean-Georges Baer maintained a close friendship and fruitful working collaboration with Charles Joyeux, whose laboratory in Paris he joined in 1927 for a period of two years.⁹⁷ Baer dedicated his *“Ecology of Animal Parasites”* of 1952 to his friend and later professor of the University of Marseille in estimation of this steady flow of ideas cumulating in more than 200 joint publications.⁹⁸ Joyeux in turn co-authored with Adolphe Sicé his *“précis de médecine des pays chauds”* published in 1937 and soon to become a classic in the literary genre of tropical medicine. However, more important for the creation of a Swiss laboratory were the contacts between the two botanists Claude Favarger and George Mangenot. After the war, Favarger studied at Sorbonne University under Mangenot and Alexandre Guilliermond where he soaked up the *“précieuse tradition française.”*⁹⁹ In 1949 he accepted Mangenot’s invitation to join the French scientific community to Adiopodoumé and indulged in the taxonomy of Melastomaceae in West Africa.¹⁰⁰ This invitation to the tropics was of the highest value for the Swiss botanist, who was engaged in defending taxonomy against other scientific branches such as chemistry and physiology. At his inaugural speech at the University of Neuchâtel, he was convinced that *“the study of classification, i.e. the role of attributing a place to each group in a fixed hierarchical framework, is of huge philosophical value and constitutes a useful effort of reasoning.”*¹⁰¹

96 (ANF), ARCHIVES DE L’ORSTOM, 19900236, Art. 53, Raoul Combes, Note sur l’installation en Côte d’Ivoire d’un Centre Suisse de Recherche Tropicale. Lettre de M. le Professeur Grassé à M. le Président du Conseil, 06.11.1950, pp. 1–6, here: p. 3.

97 Jean-Georges Baer, *“Charles Joyeux”* (1881–1966), in: Bulletin de la Société Neuchâteloise des Sciences Naturelles, Vol. 90, 1967, pp. 293–296, here: p. 294.

98 Baer, *Ecology of Animal Parasites*, Urbana 1952.

99 Georges Dubois, *Naturalistes Neuchâteloises du xx^e siècle* (Cahiers de l’Institut Neuchâtelois), Neuchâtel 1976, p. 21.

100 Claude Favarger, *Recherches taxonomiques sur les Mélastomacées d’Afrique Occidentale*, in: *Lyeuria*, Vol. 10, 1952, pp. 53–56.

101 Favarger, *Systématique et morphologie dans la botanique moderne. Leçon inaugurale prononcée le 30 avril 1947 à son installation comme Professeur ordinaire à la chaire de botanique*, in: Bulletin de la Société Neuchâteloise des Sciences Naturelles, Vol. 70, 1947, pp. 21–32, here: p. 28.

In the aftermath of WORLD WAR II then, scientists from the Western part of Switzerland and their French counterparts created new or re-vitalized former contacts disrupted by the devastating effects of war. In so doing, French as a common language facilitated these mutual interactions. More advantageous perhaps was the fact that both professional groups belonged to the same “*epistemic culture*”, creating and justifying scientific knowledge.¹⁰² There was a common strategy to experience the natural world and to arrange nature’s phenomena along a “*hierarchical framework*”, to use Claude Favarger’s expression. However important these ties on a scientific level might have been, Switzerland also maintained a direct link to Côte d’Ivoire through what historian Pierre Kipré aptly called the “*petit monde des Blancs*.”¹⁰³

SWISS PIONEERS IN CÔTE D’IVOIRE

In a letter drafted in March 1952, Urs Rahm, the first director of the CSRS, was puzzled by the high numbers of Swiss citizens living in the African country.¹⁰⁴ The source of his astonishment was the close-knit social network within which he and all the subsequent Swiss researchers operated, for compared to countries such as Egypt or the Gold Coast, Côte d’Ivoire never attracted high numbers of Swiss emigrants.¹⁰⁵ Even though Swiss emigration to Africa peaked in the aftermath of WORLD WAR II, the compatriots Rahm encountered – and who proved to be crucial in their support for the CSRS – belonged to the generation who left the country after WORLD WAR I, escaping economic recession at home. Most of them found employment in French trading societies such as the SOCIÉTÉ COMMERCIALE DE L’OUEST AFRICAÏN (SCOA) or the COMPAGNIE FRANÇAISE DE L’AFRIQUE OCCIDENTALE (CFAO), monopolizing the colony’s entire foreign trade. Others were engaged in “*opening up*” of the colony by improving its infrastructure.¹⁰⁶ Jules Vallon, for example, left his homestead Payerne in Western Switzerland and made his way up to the higher echelons of SCOA; Victor Balet emigrated from the Valais in 1923, where he had been working in the timber industry for more than thirteen years, becoming one of the most important wood exporters in Côte d’Ivoire; Henri Vitoux, in turn, was afflicted with the fate of the latecomer. Arriving in 1934, he was engaged in public works until his business came to a standstill during WORLD WAR II. After the war he became a trustee and devoted much of his time writing poems “*admiringly evoking the heavy and hot atmosphere of the tropical countries where the tam-tam sings*.”¹⁰⁷

102 Cetina, *Epistemic Cultures. How the Sciences Make Knowledge*, Cambridge, London 1999, p. 1.

103 Pierre Kipré, *Memorial de la Côte d’Ivoire. La Côte d’Ivoire Coloniale*, Abidjan 1988, p. 230.

104 Fonds Urs Rahm (FUR), *Correspondance Côte d’Ivoire 1951–1953*, 13.03.1952, pp. 1–3, here: p. 1.

105 René Lenzin, *Schweizer im kolonialen und postkolonialen Afrika. Statistische Übersicht und zwei Fallbeispiele*, in: *Studien und Quellen*, Vol. 28, *Die Auslandschweizer im 20. Jahrhundert – Les Suisses de l’étranger au xx^{ème} siècle*, Bern, Stuttgart, Wien 2002, pp. 299–326, here: pp. 302–303.

106 Catherine Coquery-Vidrovitch, *L’impact des intérêts coloniaux. SCOA et CFAO dans l’Ouest Africain, 1910–1965*, in: *Journal of African History*, Vol. 16, No. 4, pp. 595–621.

107 P. Laraisse, *La colonie Suisse en Côte d’Ivoire*, in: *Echo. Zeitschrift der Schweizer im Ausland*, Vol. 12, No. 33, 1953, pp. 28–29, here: p. 29.

Sourd
Au fond de la forêt
le tam-tam s'enfle et tonne
Court
A travers le feuillage épais,
chante, résonne
Mugit.
Par-dessus le ravin
par-dessus la colline,
Bondit
Soudain vers un village
ou l'entend qui s'incline
Et descend
Et le voilà qui parle
à celui qui l'entend.
Il annonce la mort
d'un ami, d'un parent
Et souvent
Il dit l'avènement joyeux
d'une naissance.
Il part,
Ayant repris au sol
un regain de puissance ;
Gaillard,
Va porter la nouvelle
ou joyeuse ou fatale,
Court
Au fond de la forêt
où son rythme s'étale,
Sourd

H. Vitoux, 1932

Of all the members of the Swiss colony in Côte d'Ivoire, Gustave Meyer and Eugen Wimmer left the most substantial historical traces. In his autobiography "*un demi-siècle en terre ivoirienne*", Meyer described the many obstacles waiting for all those who accepted the burden of preparing the ground for the country's economic take-off. He tried to convince his readers that the life of a "*pioneer*" in the tropics was not necessarily crowned with economic success but inflicted with loss and full of privation. Looking back on this first period working in the trade economy he complains:

*“Arriving in Côte d’Ivoire my salary was 250F per month, which was not more than my sister earned as a household help for a physician in Berne. During my three years of loyal service, I touched the 425F threshold plus a small gratuity. By abstaining from everything, I was able to save the 10’000F that my brother had lent me but which I had lost in a financial affair before leaving Switzerland.”*¹⁰⁸

Trying to raise his professional status, Meyer shifted from one employment to another: In 1927 he established himself in Adzopé where he cleared large areas of dense forest to set up a plantation business, which he had to start from scratch again due to substantial crop failure caused by plant disease. Looking back on his life in the colony and not entirely devoid of nostalgia and self-fashioning, Meyer concluded that *“I have not become a rich man. I had just enough to live a decent life because the work of a pioneer has never yielded much wealth. It is always those who come later who have the chance to get rich.”*¹⁰⁹

While Meyer’s career can be classified according to Harald Fischer-Tiné as belonging to the *“white subalternity”*, the same attribution is less valid in the case of Eugen Wimmer.¹¹⁰ After completing his engineering studies at the SWISS FEDERAL INSTITUTE OF TECHNOLOGY in Zurich during 1914–1918, Wimmer moved to Paris where he worked as an *“ingénieur adjoint”* in the engineering company of René Dumoulin. Fascinated by the prospect of imbuing *“backward”* African colonies with the spirit of modernization, he shifted his business to Abidjan where he became director of the CIE. AFRICAINE D’ENTREPRISES (CAE) in 1925 and founded the UNION D’ENTREPRISES COLONIALES (UDEC) six years later. Wimmer fathered some of the major public work projects in the colony. The logic of colonial economy based on the extraction of products for metropolitan consumption required reliable ways of transportation between different sites of agricultural production and the ports.¹¹¹ On behalf of the French Colonial Ministry, UDEC constructed a railway line connecting Abidjan’s *“port-in-the-making”* to the granite quarries of Aké Béfiat some 60 miles north of the bustling town.¹¹² The development of the urban infrastructure became even more pressing with the

108 Gustave Meyer, *Un demi-siècle en terre ivoirienne*, Paris 1975, p. 70.

109 *Ibid.*, p. 305.

110 Harald Fischer-Tiné, *Low and Licentious Europeans. Race, Class and “White Subalternity” in Colonial India*, New Dehli 2009.

111 Between 1924–1928 maritime traffic increased from 158’489t to 22’578t, see: Zan Semi-Bi, *La politique coloniale des travaux publics en Côte d’Ivoire 1900–1940*, in: *Annales de l’Université d’Abidjan*, Vol. 1, No. 2, 1973–1974.

112 *Schweizer bauen und planen im Ausland – Les Suisses construisent à l’étranger. Ausstellung an der ETH-Hönggerberg Zürich – Exposition organisée par l’école polytechnique de Zurich*, Zürich 1978, p. 8.

decision to shift the capital from Bingerville to Abidjan in 1934. Between 1930 and 1960, UDEC constructed several financial institutes, cinemas, hotels, factories, apartments, embassies and bridges – voiceless symbols of the colony’s increasing economic and political importance for the Western powers.¹¹³ Wimmer and – to a lesser degree all the members of the Swiss colony – literally personified those different economic and political interests in the French territory. The boundaries between the political and the economic realms were porous and successful businessmen were likely to be encountered on a political stage too. In the year of the foundation of UDEC, Wimmer accepted the request to act as a correspondent for Côte d’Ivoire on behalf of the Swiss consulate in Dakar.¹¹⁴ Switzerland did not maintain an embassy prior to Ivorian independence in 1960. All political issues concerning AOF were dealt with by the consulate in Dakar. After WORLD WAR II, Switzerland created an “*agence consulaire*” in Abidjan. In 1952 it was transformed into a vice-consulate and Wimmer awarded the title of an honorary vice-consul.¹¹⁵ In this function he was supposed to nourish the “*feelings of solidarity*” among the members of the Swiss colony, as well as to turn his attention to the economic relations between his sphere of influence and Switzerland.¹¹⁶ Not surprisingly for a person who not only cultivated professional relations to the respective business circles but whose ties reached all administrative levels of the French colonial administration, Wimmer was the driving force in providing the Swiss scientific community with a laboratory in the tropics. With this scientific movement Switzerland was likely to become a rival in the second scramble for Africa.

COLONIAL RIVALRIES

The several Swiss zoologists who gathered at the STI in 1950 unanimously decided to accept the French offer to establish a scientific laboratory in Adiopodoumé. Rudolf Geigy, who would support the center with money and a steady supply of young scientists, was however convinced that the CSRS could not be a STI-owned lab. Even though Wimmer’s project was tailored to the needs of the STI, Geigy argued that his institute could not focus

113 Famous was his first bridge made of armored concrete over the river Sassandra, see: (SCNAT), Depot Burgerbibliothek Bern, GA SANW 350, Zentralvorstand Lausanne, Korrespondenz 1953–1958, Notices biographiques sur G. Mangenot et E. Wimmer, pp. 1–2, here: p. 1.

114 (BAR), E 2200.5 (-), 1969/217, 4, Agence Consulaire de Suisse à Abidjan, Chef des Konsulardienstes (EDA) to Eugen Wimmer, 09.09.1931. In this role he had a) to report about job opportunities and general political and economic developments b) organize the handing-over of official documents from political institutions to the respective document-holders, c) help in the process of producing Swiss passports and d) notify of the cashing transferred to him by the consulate.

115 (BAR), E 2200.5 (-), 1969/217, 2, Correspondances officielles, 1952, EPD to Eugen Wimmer, 20.02.1952.

116 Ibid.

on one specific spot in the tropics but had to pursue scientific research in various geographical locations.¹¹⁷ The argument of the geographical flexibility is not all too convincing because three years after the creation of the CSRS, the STI established its own field laboratory in Ifakara.

The French reactions to Switzerland's advances of 1947 are a good indicator for science's symbolic status in sustaining the French empire after the war. Switzerland's move towards the colony did not meet with complete enthusiasm but was occasionally considered as a threat to France's regained colonial vigor. One of the most authoritative voices uttering concerns belonged to biologist Pierre Grassé, a giant in the landscape of French zoology. As has been mentioned in the first chapter, Grassé was part of the French mission assigned to investigate the suitability of Adiopodoumé as a hotspot for French scientific activities in 1945. His interests in the tropics were not entirely altruistic for Adiopodoumé was considered to become the new site of his war-destroyed laboratory of biology. In a letter to the Office's scientific committee he made clear that

*"[...]the Swiss laboratory follows non-stated aims that have nothing to do with science: medical trials for the Swiss industry, trials with insecticides, impregnation of wood [...] I can give you the evidence. Without any colonial territory, Switzerland needs experimental fields for its industry. It believes to have them found in Adiopodoumé."*¹¹⁸

Grassé raised one of the thorny issues that would continue to be the subject of permanent discussion between the two parties: the question of what constitutes ideologically justifiable scientific practices in the colonies. While the French scientific discourse heralded science's emancipatory functions for the moral and material uplift of African people, Grassé suspected Switzerland of abusing the continent as a testing site for the profit of the home-based pharmaceutical industry. This subject will be discussed further below. It suffices here to say that his arguments were taken up to a formal stage by former minister Marc Rucart who, in a letter to the new Minister of Overseas France in the Pleven government, François Mitterand, wrote that Switzerland's arrival in Côte d'Ivoire would be nothing other than

117 (BAR) E 2200.5 (-), 1979/93, 10, 0.2.23, Centre technique Suisse de Recherche Scientifique en Côte d'Ivoire, 1961–1965, Procès verbal de la séance du 7 mai 1950 convoquée à l'Institut Tropical à Bâle par les initiateurs du projet d'un Centre Suisse de Recherches en Côte d'Ivoire sous la présidence de Monsieur Jean G. Baer, Recteur de l'Université de Neuchâtel, 07.05.1950, p. 2.

118 (ANF), 19900236, Art. 53, Pierre Grassé au président du conseil scientifique ORSC, 14.10.1950, pp. 1–3, here: p. 2.

“humiliating to French science.”¹¹⁹ In the inner-French dispute about the consequences of Swiss science in the tropics, the Office’s positive opinion prevailed. Its director Combes refuted Grassé’s misconceptions by making clear that

*“[...] the Swiss laboratory which has only three workbenches, is not replacing any French organization. Far from constituting a menace to the national prestige, the presence of the Swiss lab is rather a direct eulogy of a French realization.”*¹²⁰

The Office even went a step further in transforming Adiopodoumé into an international scientific platform by officially requesting Wimmer to attract Norwegian and Danish research groups to Côte d’Ivoire.¹²¹ In the end it was the Dutch who followed suit and who established a research outpost under ORSTOM’s direct administrative control. Thus, the re-enforcement of French science and the strengthening of international scientific collaboration were not mutually exclusive. Rather the invitation to “non-colonial” Switzerland and the Scandinavian countries reveal the French intention to interpret colonial science in the light of humanitarianism and as a unifying force. It left the door ajar for Switzerland’s entry into the colonial realm.

Ordering Science...

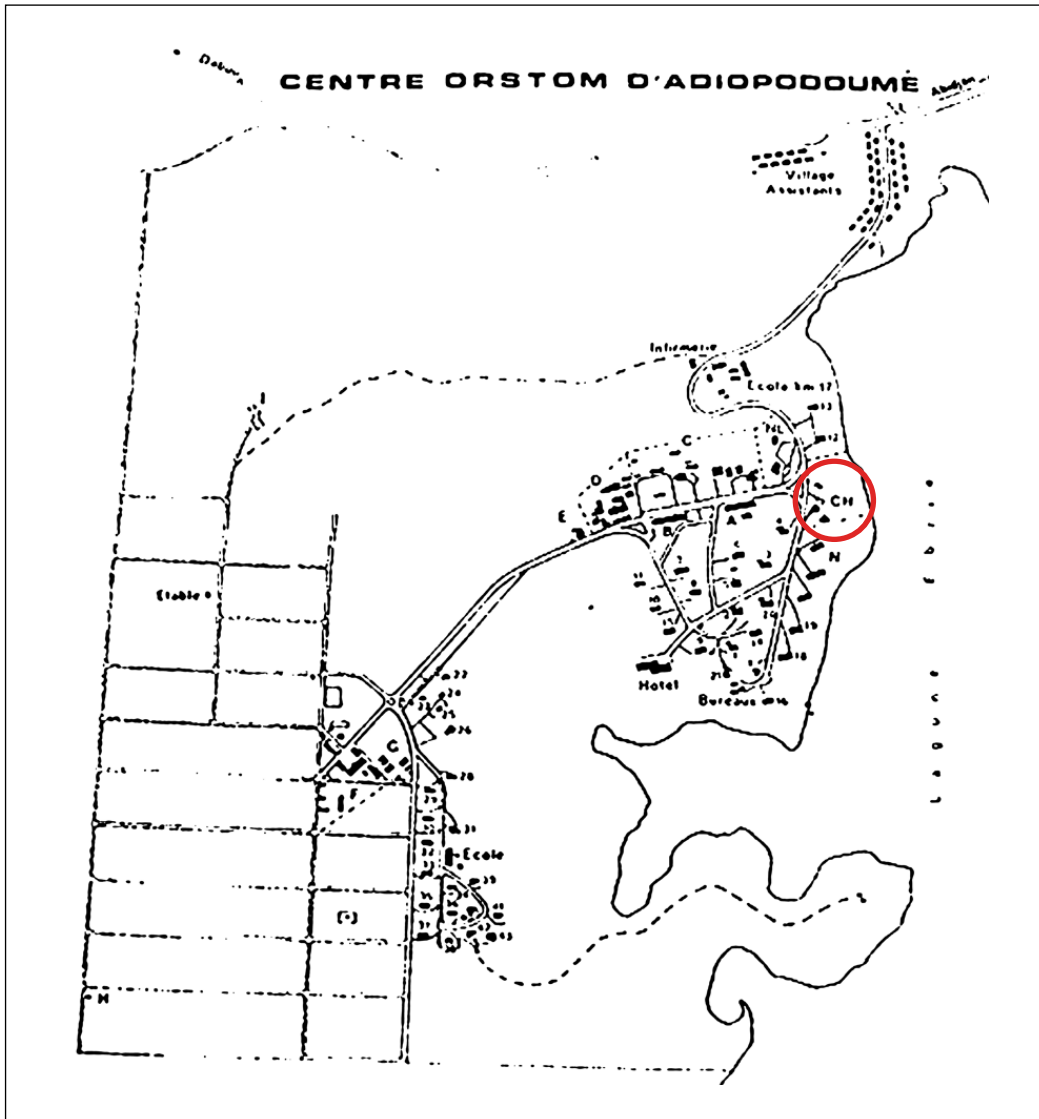
On August 1st 1951 a small group of Swiss and French scientists and colonial administrators gathered around the CSRS in order to inaugurate the new laboratory complex silhouetted against the muddy Ebrié Lagoon. Everyone was in celebratory mood and congratulated each other on the impressive achievements and future scientific collaboration. Gone were the dissonances that overshadowed the Swiss move to the tropics, as if the harmony of the natural surroundings endorsed the equivalent in human relations. The number of speakers who, one after the other, raised their voices perpetuated the myth of the long tradition of scientific partnership between the two countries and praised the “Franco-Swiss Family” that Adiopodoumé would come to stand for.¹²² The image of harmonious familial bonds was captured in Combes’ speech, who assured his audience that

119 Ibid., Marc Rucart to François Mitterand, 13.11.1950, pp. 1–2, here: p. 1.

120 (ANF), Combes, Note sur l’Installation, p. 4.

121 (BAR), E 2200.5 (-), 1969/217, 2, Eugen Wimmer to the Swiss consulate in Denmark, 16.10.1954, Ibid., Eugen Wimmer to the Swiss legation in Norway, 17.10.1954.

122 ARCHIVE MUSÉE D’HISTOIRE NATURELLE DE GENÈVE (AMHN), 360.B.4.4, Mission scientifique en Côte d’Ivoire 1953–1957, Une émouvante manifestation d’amitié Franco-Suisse s’est déroulée le premier août à Adiopodoumé (à l’Institut de la Recherches Scientifique).



Map ORSTOM, Centre d'Adiopodoumé and the CENTRE SUISSE DE RECHERCHES SCIENTIFIQUES (CSRS)

“Many times the international character of scientific research has been underscored. The conditions in which this collaboration between the world’s intellectual elite manifests itself and the nature and the frequency of the established relations, allows one to speak of a huge global scientific family.”¹²³

123 (SCNAT), GA SANW 826, Kommissionen CSRS, Varia I 1951–1970, Premier août 1951, Discours de Monsieur le Professeur Combes, pp. 1–3, here: p. 1.

The image of the Swiss-French family was deliberately chosen; perhaps not so much because of the personal friendships and scientific exchanges Côte d'Ivoire would offer, but because of – in the very sense of the word – paternalistic nature of these relations. The Swiss laboratory – another building constructed by Eugen Wimmer – was too small even to frighten the most hard-pressed French colonialists. It offered laboratory space for three scientists and was most modestly equipped so that the scientists in residence had to ship their scientific material from Switzerland to the Ivorian coast according to their specific research agenda.¹²⁴ A convention signed between the two parties in 1951 obliged ORSTOM to rent out a strip of land to Switzerland for a period of fifty years and to provide running water and electricity to the laboratory.¹²⁵ On the other hand, the agreement codified the CSRS's dependence on the powerful French research organization. The Commission of the CSRS had to make sure that they restricted themselves to research activities in the field of natural sciences, with the exception of geology and mineralogy, for France refused to tolerate any foreign activities in scientific fields that promised direct economic gains. Furthermore, ORSTOM maintained firm control over the Swiss scientific activities. The Swiss research agenda had to get the Office's approval and all the researchers as well as Swiss visitors to Adiopodoumé had to be announced in advance. This code of conduct was sustained even long after Côte d'Ivoire gained political independence and was a source of constant resentment between the two countries because France suspected Switzerland of only partially meeting its demands.¹²⁶

The unequal relationship that prevailed on a policy level overshadowed the politics of daily life. The tight financial framework within which the CSRS operated hardly allowed the Swiss scientists to meet the social obligations that were more or less implicitly expected of white Europeans living on the "*petit plateau*." Quite naturally for compartmentalized spaces such as the ORSTOM compound, social contacts were restricted to the whites living on the spot. ORSTOM owned a small club with a swimming pool and a tennis court where all the scientists and their families would meet after an exhausting working day in the

124 Urs Rahm, La Côte d'Ivoire. Centre de Recherches Tropicales. Possibilités pour la participation suisse à l'exploration de la Côte d'Ivoire, in: Acta Tropica, Vol. 11, 1954, pp. 222–295, here: p. 224.

125 (SCNAT), GA SANW 829, Kommissionen CSRS, Akten Generalsekretariat 1984–1990, Convention entre l'Office de la Recherche Scientifique Outre-Mer, désigné ci-après par les initiales O.R.S.O.M., dont le siège est sis 20, rue Monsieur, Paris VIIe, représenté par son Directeur, Monsieur COMBES, d'une part et La Commission du Centre Suisse de Recherches Scientifiques en Côte d'Ivoire, représentée par son Président, Monsieur J. G. Baer, d'autre part, 20.07.1951.

126 (SCNAT), GA SANW 826, ORSTOM Korrespondenz 1951–1976, ORSTOM's director general, Guy Camus to Jean-Georges Baer, 13.02.1969.

laboratories or the field. Swiss and French scientists celebrated the national days on 14th July and 1st August and the Swiss directors were invited over to the French on several other occasions. Social reciprocity however was hardly possible. As André Aeschlimann, the CSRS's director between 1959 and 1962 lamented:

“Our tenement is about the size of a handkerchief. One single room [...] I do very much understand why the chief vehemently recommended not having children. Where to put them? [...] But seen from the French perspective, this situation is lamentable. It is not very nice to hear during each visit: how small it is at your place. Couldn't you have built it with a little bit more space? Switzerland, the country of the banks which is so wealthy etc. [...] I believe that if one accepts the establishment of research outposts abroad, which officially represent Swiss scientific research, one has to fully embrace the idea or leave it. We have done it but to such a mediocre extent that we are not taken very seriously at ORSTOM.”¹²⁷



The CSRS's main building colloquially called "le clapier" [rabbit hutch], source: Hansjörg Huggel

127 (FAA), Correspondance Côte d'Ivoire 1959–1962, André Aeschlimann to Thierry Freyvogel, 12.08.1959, pp. 1–2, here: pp. 1–2.

It is not surprising that science in the colonies did not have the same significance for Switzerland as it did for France. In striking contrast to France's intention to improve local economies through science's rationality, the CSRS should entirely serve Swiss interests. It was considered a site where young Swiss biologists would broaden their minds in studying tropical nature, where new pharmaceutical products could be tested and from where scientific specimens and ethnographic objects could be sent home in order to enrich museums and scientific institutions. The laboratory's possible contribution to serving a Third World country was explicitly denied.¹²⁸ From a legal point of view, the CSRS was created as a foundation and accountable to the MINISTRY OF THE INTERIOR of the Swiss government. The administration and overall responsibility lay in the hands of the "*Commission for the Centre Suisse*" which was placed under the umbrella of the SNG. In analogy to the commission in Switzerland, a "*local commission*" for the CSRS was created in Abidjan. It comprised the several representatives of the Swiss colony mentioned above. They were asked to scrutinize the administration of the accounts as well as to facilitate the work of the scientific director in Adiopodoumé.¹²⁹ The organizational set-up of the CSRS was a far cry from the scientific professionalism displayed by the French neighbors. For young French scientists, Adiopodoumé occupied a firm place in the scientific curriculum. After having spent the first year of training in Bondy near Paris, the young French "*tropicalists*" were invited to leave the confinements of metropolitan lecture halls and to experience the tropics with all their senses. Their Swiss colleagues in turn not only lacked tropical experience but the majority who arrived in Côte d'Ivoire did so without knowing exactly which career paths they would walk down once back in Switzerland. The most striking difference however concerned financial modalities. From the outset, the CSRS found itself in a precarious financial situation. The laboratory had to cope with piecemeal contributions deriving from various sources, of which that of the pharmaceutical industry proved to be the most

128 (ASTI), CSRS, Adresses, Commission, Principes, Ziele CSRS, see also: (StABS), ED-REG 1c 190–4 (1), Schweizerische Forschungsstation Elfenbeinküste (Adiopodoumé) 1951–1968, Baer, Rapport adressé au Haut Conseil Fédéral à l'appui d'une requête en faveur d'une subvention destinée au Centre Suisse de Recherches Scientifiques en Côte d'Ivoire, pp. 1–6.

129 (BAR) E 2200.5 (-), 1979/93, 10, 0.2.23, Henri Vitoux, procès-verbal de la séance du Comité local du Centre Suisse de Recherches Scientifiques en Côte d'Ivoire tenue au domicile de Monsieur Wimmer, le dimanche 12 Janvier 1952, pp. 1–3, here: pp. 2–3. The local commission was dissolved in 1956 and replaced by the vice-consulate, see: (BAR), E 2400, 1000/717, 1, Abidjan, Jahresberichte 1953–1959, Eugen Wimmer, rapport de gestion du vice-consulat de Suisse à Abidjan 1956.

reliable.¹³⁰ This situation changed slightly in 1954, when the Swiss parliament approved an initiative to increase the subsidies to the SNG from CHF 300'000 to CHF 320'000, with the additional money allotted to the CSRS. The difficulties in raising money for Swiss research in the tropics and the resented lack of interest among the academia in Switzerland would remain a permanent issue throughout the years to come.

COMPLYING WITH COLONIALISM?

This chapter has dealt with a double movement: the rise of a science for the colonies within the larger framework of an emerging national science policy in Switzerland, as well as the translation of Swiss science to the French colony of Côte d'Ivoire. The first movement has to be seen in the context of a general trend in European countries that paid increasing attention to the sciences during the interwar period. While science became meaningful within the wider empire for France and for Britain, it addressed domestic economic issues in Switzerland. Apart from its name, originally there was nothing "*colonial*" about colonial sciences in Switzerland. Colonial sciences were a conglomerate of several scientific activities that had a long tradition in a non-colonial country such as Switzerland. However, in the decade following WORLD WAR II, the increasing internationalization of scientific activities as well as the contacts to a small but influential group of Swiss businessmen operating in Côte d'Ivoire, brought Switzerland into the colonial realm. At least in this second movement, Switzerland resembled other imperial countries. The CSRS was the first Swiss institution of its kind. Its organization was strongly dependent on ORSTOM, who exerted tight control over the scientific agenda and the CSRS's activities. Corseted by its powerful French neighbor, the CSRS suffered considerable neglect from Switzerland. The reason why the CSRS was disregarded in the academic landscape in Switzerland had mainly to do with the changing scientific priorities in Switzerland in the context of COLD WAR politics. Nuclear physics, space research and molecular biology were more apt to forge international scientific ties in a COLD WAR context than did activities that can be classified

130 Between 1951 and 1954 private institutions supported the construction of the Centre Suisse with an amount of CHF 104'000, the Swiss cantons accounted for a sum of CHF 13'000. CHF 21'000 was derived from "*other funds.*" Research activities were mainly supported by the Swiss National Science Foundation. See: (SCNAT), GA SANW 458, CSRS, Gaston Clottu, Budget de la Confédération pour 1955. Augmentation de CHF 300'000.- à CHF 320'000.- de la subvention fédérale en faveur de la Société Helvétique des Sciences Naturelles, cette augmentation de Fr. 20'000.- étant destinée au Centre Suisse de Recherches Scientifiques en Côte d'Ivoire, 09.12.1954, pp. 1–4, here: p. 3.

according to Niklaus Stettler as belonging to the “*historical*” tradition of biology, following a descriptive approach towards nature.¹³¹ This shift in research priority did not escape Jean-Georges Baer who lamented that

*“Today there exists a tendency in Switzerland and elsewhere to favor research in the realm of nuclear physics to the detriment of the biological sciences, whose results are generally not directly applicable. We however think that it would be wise to retain a certain equilibrium between the different scientific disciplines because no problem imposed by daily life will be solved by just one of them.”*¹³²

Swiss scientific practices in Côte d’Ivoire did not correspond to the new trends at home and it was perceived as anachronistic even by French standards. As it seems, France had a more or less clear-cut idea of what science in the tropics after WORLD WAR II should look like. The different forms of scientific practices are the subject in the next chapter.

131 Niklaus Stettler, *Natur erforschen. Perspektiven einer Kulturgeschichte der Biowissenschaft an Schweizer Universitäten 1945–1975*, Zürich 2002, p. 11, see also: Strasser, *The Coproduction of Neutral Science and Neutral State in COLD WAR Europe*.

132 (BAR), E 3001 (B), 1978/30, 62, 07.149, Fondation pour un Centre Suisse de Recherches Scientifiques en Côte d’Ivoire, 1951–1954, Jean-Georges Baer to Ph. Etter (EDI), Monsieur le Conseiller fédéral, 28.04.1954, pp. 1–2, here: p. 2.

CHAPTER 3

Scientists in the Field, 1950—1960

“Le premier pays vers lequel, nous nous sommes tournés pour des accords de coopération, c’est l’ancien pays colonisateur: la France, que nous considérons comme notre meilleure amie.”

Félix Houphouët-Boigny

FROM TROPICAL SCIENCE TO SCIENCE IN THE COLONIES

With the creation of the scientific field station in Côte d’Ivoire and the STIFL in Tanganyika some years later, from the early 1950s onwards Switzerland constantly delegated young scientists to the French and British overseas territories. Like their European colonial peers, they set out to explore the African continent, to conduct various experiments and to collect scientific specimens.

The present chapter follows several Swiss scientists to Côte d’Ivoire and Tanganyika and analyzes their ways of “*understanding*” the tropical world through their everyday fieldwork. Its aim is to show that the different local constituencies encountered in Côte d’Ivoire and Tanganyika led to two different colonial logics of scientific research. In Côte d’Ivoire, the French monopole over the “*mission to civilize*” through science and technology impeded similar projects by the CSRS for which the applied sciences had long been a very sensitive issue.¹ Instead, Swiss scientists in Adiopodoumé started to “*discover*” the “*untainted*” nature and to collect masses of scientific material that was sent back home. The fact that this extractive nature of Swiss science in Côte d’Ivoire was regarded suspiciously and termed “*colonial*” by the French neighbors suggests that the term “*colonial sciences*” contains not only various activities according to different geographic locations but also different temporal structures within narrow geographic boundaries.

1 Conklin, *A Mission to Civilize*.

Tanganyika tells a different story. There, Swiss scientists could hardly count on a tight network of colonial administrators or scientists but had to rely on the knowledge provided by Swiss missionaries and the local population. It is argued that these relations with Swiss development agencies and the daily encounter with economic deprivation accounted for the more welfarist approaches of Swiss scientists in Ulanga district. In other words, while in Côte d'Ivoire, the ordering of nature according to fixed epistemologies was a major scientific approach, Africa's development and progress became the major concern for Swiss scientists working in Tanganyika. Of course, these two different social settings in which Swiss science took place contribute a lot to the Ph.D. study's larger question of how the process of decolonization impinged on Swiss scientific research in Africa. As we will see later, political developments were absorbed to different degrees by the Swiss scientists working at the two sites. The postcolonial pact concluded between France and the Ivoirian elite and the stunning continuities from colonial to the postcolonial era did not impose changes for Swiss science in Adiopodoumé. Despite the political character of ordering the other's empire, political developments went rather unnoticed by the CSRS. On the contrary, politics ruled the laboratory in Tanganyika. Not being able to sail in the backwater of strong colonial interests, Swiss scientists in Ifakara closely scrutinized the processes of how rural Ulanga district was slowly drawn into nationalist agitation. Through the lenses of Swiss researchers, the district became the "*development laboratory*" where the future political relationship between Europe and Africa could be studied.

THE DISCOVERY OF CÔTE D'IVOIRE

Arriving in Adiopodoumé in 1951, one of the issues that ranged prominently on Urs Rahm's "*to do-list*" was to write an introductory chapter to the new natural environment with the telling title "*La Côte d'Ivoire, Centre de Recherches Tropicales. Possibilités pour la participation Suisse à l'exploration de la Côte d'Ivoire*" which he thought would be a guide for future scientists working at the Ebrié lagoon.² Rahm directed his readership's attention to the immense richness of the natural surroundings that provided endless possibilities for scientific exploration. With his description of the lagoon, the "*virgin*" forests and the nearby savannah, Rahm joined in a discourse of the tropics as an earthly paradise, a Garden Eden that had a long tradition in the Western arsenal of representing the tropical world and that struck a

2 Rahm, *La Côte d'Ivoire. Centre de Recherches Tropicales. Possibilités pour la participation Suisse à l'exploration de la Côte d'Ivoire*, in: *Acta Tropica*, Vol. 11, 1954, pp. 222–295.

chord with his European readership at home.³ Pierré Grassé erred when he feared about Adiopodoumé becoming the experimental testing ground for the Swiss pharmaceutical industry. The forces at play were romanticization and not manipulation. Adiopodoumé was the fulfillment of a Swiss colonial desire, a “*colonial fantasy*” in Susanne M. Zantop’s very usage of the term and the confirmation of all those images that had been associated with the African continent.⁴ Working at the CSRS towards the end of the 1950s, André Aeschlimann, whom we will hear more about below, was perhaps more explicit about the significance of the site for Swiss science: In 1959 he wrote:

“We live in a kind of paradise. Only the humidity is difficult to bear. It attacks everything, it drains one’s strength. Everything is moist, everything goes moldy, everything rusts. But what a beautiful country! The nearby forest – so green that it seems almost black – is gorgeous. This huge virgin forest – the stuff of our dreams – with trees more than forty meters high and with its tangle of liana, some of which are thicker than an arm [...] and its silence, this immense silence that increases the mystery.”⁵

The widespread use of the paradise-metaphor in relation to the Côte d’Ivoire is interesting per se and would deserve further analysis. The issue is raised here because this specific trope determined to large extents the scientific practices on the ground. Once they had arrived on the Ivorian shore, the scientists, most of whom internalized Geigy’s tradition of experimental and medical zoology, did not necessarily continue their lab-based work but were attracted to studying nature outside the laboratory walls and the prospect of discovering yet unknown species. Urs Rahm himself is probably the most telling example. While still in Switzerland, Rahm worked on a doctoral dissertation on the post-embryonic development of alderflies (*Sialis lutaria* L. [Megaloptera]).⁶ Through cording of body parts and the extirpation of brains, he was able to show that the larvae’s metamorphosis was dependent on a special hormone secreted by a gland located in the brain.⁷ The new natural environment of Adiopodoumé, however, required a less interventionist scientific ap-

3 Philip D. Curtin, *The Image of Africa. British Ideas and Action, 1780–1850*, Madison 1964, Eckert, “*Tropics*”, in: Akira Iriye and Pierre-Yves Saunier (eds.), *Palgrave Dictionary of Transnational History*, Felix Driver, Luciana Martins (eds.), *Tropical Visions in an Age of Empire*, Chicago 2005.

4 Susanne M. Zantop, *Kolonialphantasien im vorkolonialen Deutschland (1770–1870)*, Berlin 1999, p. 11.

5 (FAA), André Aeschlimann, 18.04.1959.

6 Rahm, *Die innersekretorische Steuerung der postembryonalen Entwicklung von Sialis lutaria L. (Megaloptera)*. Inauguraldissertation Universität Basel, Basel 1952.

7 *Ibid.*, p. 174.

proach. At Rudolf Geigy's behest, Rahm started to study the distribution of plankton in the Ebrié lagoon. From an ecological point of view, this was a fascinating topic because, with the opening of the canal de Vridi and the access of the lagoon to the salty ocean, the ecological conditions of the lagoon were likely to change.⁸ Despite the discovery of a new strain of medusa, the trips on the lagoon were however short-lived. Rahm's naturalist mind was too erratic to stick to one specific topic. Soon after his arrival in Adiopodoumé, he started focusing his research on the study of mid-size mammals that were brought to the laboratory by locals living in Adiopodoumé. The fauna of the African countryside was still considered as an uncharted territory and Rahm, who at the beginning of the 1950s was the sole zoologist on the ORSTOM site, became its ambitious cartographer.⁹ His drive for scientific discoveries resulted in a myriad of short publications on the main features and behavior of the "unknown" animals.¹⁰ The tropical paradise levered out the forces of time: there was no time pressure for the study of nature, no research agenda that would have restricted one's own scientific interest and no expectations that should have been met. To put it in the words of Urs Rahm:

*"As soon as I arrived, I developed an interest in mammals and the like. We never had snakes but we had turtles and other animals. But I have to say that we did not have a research objective. That was impossible, because if you wanted to do research on one specific animal, then you would have been obliged to search for it and if you were lucky you would have found it one year later. I just lived from hand to mouth. I analyzed the animals as soon as they arrived at the Centre."*¹¹

Rahm's depiction of colonial life as "living from hand to mouth" adds further credentials to the image of Adiopodoumé as a scientific paradise but conceals the practical aspects of the term "field-work" in the production of scientific knowledge. The research process also included expeditions to different parts of the country in order to collect the various specimens. These were not only important for the functioning of the CSRS but "vital for the existence of the

8 Rahm, Zur Ökologie des Zooplanktons der Lagune Ebrié (Elfenbeinküste), in: Acta Tropica (Separatum), Vol. 21, No. 1, Basel 1964.

9 Fonds Urs Rahm (FUR), Urs Rahm, 14.02.1952.

10 See for instance: Rahm, Beobachtungen an *Atherurus africanus* (Gray) an der Elfenbeinküste, in: Acta Tropica, Vol. 13, No. 1, 1956, pp. 86–94, Rahm, Beobachtungen an den Schuppentieren *Manis tricuspis* und *Manis longicaudata* an der Elfenbeinküste, in: Revue Suisse de Zoologie, Vol. 62, No. 2 /29, 1955, pp. 361–367, Rahm, Einige Schlangen des westafrikanischen Urwaldes, in: Die Aquarien- und Terrarien-Zeitschrift (DATZ), Vol. 6, No. 11, 1953, pp. 292–294, Rahm, Einige Urwaldsäuger der Elfenbeinküste, in: Leben und Umwelt, Vol. 9, 1952, pp. 1–5, Rahm, Einige Urwaldsäuger der Elfenbeinküste (II), in: Leben und Umwelt, Vol. 9, 1953, pp. 114–118, Rahm, Quelques notes sur le Botto de Bosman. Extrait du Bulletin de L'Institut Français d'Afrique Noire (IFAN), Vol. 22, No. A/1, 1960, pp. 331–342.

11 Interview with Urs Rahm, 28.04.2009.

*Swiss Tropical Institute in Basel.*¹² STI's research on African trypanosomiasis, especially before *Glossina* could be bred under laboratory conditions, depended very much on the steady flow of *Glossina palpalis* and *Glossina fusca* from Côte d'Ivoire to Basel.¹³ Apart from scientific observations, collecting was the predominant "way of knowing"¹⁴ The practice was not only restricted to scientific objects but comprised living animals for the zoological gardens, ethnographic displays for Swiss museums, for friends or private collections.¹⁵ In the eyes of relatives in Switzerland, living in Africa automatically meant compiling masses of scientific or exotic souvenirs. As Rahm defended himself against his own family's expectations:

*"It is wrong to say that I don't collect many objects. We do have some beautiful statuettes [...] I will try to collect some minerals even though they are difficult to get. To create a herbarium is much too laborious and would consume all of my precious time [...] I will however collect bugs and butterflies and that will keep me busy enough. There are some beautiful examples here but you have to work with chemicals, to soak the animals with DDT, and you have to constantly turn on the light in the box against the mold. Indeed, such a collection is not easy to create and everything needs a lot of time."*¹⁶

Collecting was not just a tricky and time-consuming colonial practice. It was also inherently political and easily able to rile up French colonial feelings. The delicacy of colonial relations was summed up by the activities of Villy Aellen who was one of the many short-term scientists working at the CSRS. Aellen, who studied zoology under Baer in Neuchâtel, was not a newcomer under the tropical sun: In 1946/47 he joined the Swiss explorer Albert Monard on a scientific expedition to Cameroon, from where they brought rich collections of scientific specimens back to Switzerland.¹⁷ In Côte d'Ivoire, Aellen was consumed by the fascination for the study of small mammals. He tried to counterbalance the deplorable fact

12 (StABS), ED-REG 1c 190-2-6 (1), Protokolle (Kuratorium, Geschäftsausschuss), 1944-1968, Eleonore Tschudin, Protokoll der Sitzung des Kuratoriums für das Schweizerische Tropeninstitut, 26.04.1954, pp. 1-6, here: p. 5.

13 (SCNAT), GA SANW 826, Kommissionen CSRS, Tätigkeitsberichte Direktor 1952-1974, Urs Rahm, Rapport du Centre Suisse du 1er Janvier au 30 Juin 1952, 13.07.1952, pp. 1-4, here: p. 5, Geigy, Élevage de *Glossina palpalis*, in: Acta Tropica, Vol. 5, No. 1, 1948, pp. 201-218.

14 John Pickstone, Ways of Knowing. A New History of Science, Technology and Medicine, Manchester 2000, Anke te Heesen, E. C. Spary, Sammeln als Wissen, in: Heesen and Spary (eds.), Sammeln als Wissen. Das Sammeln und seine wissenschaftsgeschichtliche Bedeutung, Göttingen 2001, pp. 7-21.

15 (FAA), André Aeschlimann, 12.09.1961.

16 (FUR), Urs Rahm, 28.04.1952.

17 Mémoires de l'Institut Français d'Afrique Noire (Centre du Cameroun), Série Science Naturelles, No. 1, Résultats de la Mission Zoologique Suisse au Cameroun, Dakar 1951.

that most of the scientists before him were attesting the Ivoirian fauna the same characteristics as other African countries, without a flavor for local specificities.¹⁸ The money he received from the SWISS NATIONAL SCIENCE FOUNDATION (SNSF) for the seven months at the CSRS was worth spending: his final report to the commission for the CSRS was outstanding evidence for how sporadically the colony was illuminated by the scientific gaze. To the only known species of bats in Côte d’Ivoire, Aellen added some fifty new ones; among the primates of Côte d’Ivoire, Aellen was the first to report the presence of a brown colobus monkey (*Colobus badius waldroni*) and of the royal antelope (*Neotragus pygmaeus*) – “rarely to be seen in a museum” – he could acquire many specimens.¹⁹ Aellen, who never hesitated to share his experiences with a wider readership in Geneva, was at the center of a small network comprising other Swiss researchers working in Africa as well as natural history museums in Switzerland through which the scientific trophies were traded.²⁰ It is interesting to note that even though such practices were an inherent part in the epistemic culture of both France and Switzerland, it was perceived as outdated by the former. In a letter to the SNSF, Aellen too openly reported about his scientific practices, so that Baer felt impelled to intervene:

“It is thanks to the SNSF that you are in Adiopodoumé to pursue your scientific work. It is out of the question that you provide Swiss museums with scientific specimens. I can even tell you that this is one of the reproaches we hear from Paris, where some people do regard us suspiciously and look for any pretence to annoy us. You know very well that in the colonies, the smallest affair can grow to such proportions that you could not have imagined before. We have to be very cautious, especially at the beginning. I can tell you in confidence that Paris has even ordered an inquiry into our activities, believing that our aims consist of nothing more than working for the industry and providing our museums and zoological gardens with scientific material! We should not provide any reason for criticism, neither in Côte d’Ivoire nor in Switzerland at the SNSF.”²¹

As Baer’s reaction suggests, there is no coherent “colonial science” that would do justice to the myriads of different colonial scientific practices. What seems to have existed at that time was a set of rules, a sort of standard set by the French about what constitutes accepted practice. For France, ORSTOM marked a new episode in their history of scientific activities and we remember Raoul Combe’s remark that the “colonies are not any more the museums, the

18 (AMHN), 360.B.4.4, Mission scientifique en Côte d’Ivoire 1953–1957, Villy Aellen to Jean-Georges Baer, 07.06.1952, pp. 1–3, here: p. 2.

19 Ibid., Villy Aellen to Jean-Georges Baer, 13.11.1953, pp. 1–4, Aellen, Chiroptères Nouveaux d’Afrique, in: Archives des Sciences, Vol. 12, No. 2, 1959, pp. 217–235, Aellen, Description d’un nouvel *Hipposideros* (chiroptera) de la Côte d’Ivoire, in: Revue Suisse de Zoologie, Vol. 61, No. 24, 1954, pp. 474–483, Aellen, Animaux en Côte d’Ivoire, in: Bulletin de la Société Neuchâteloise des Sciences Naturelles, Vol. 82, 1959, p. 329.

20 See his articles in *l’Impartial*.

21 (AMHN), 360.B.4.4, Jean-Georges Baer to Villy Aellen, 20.04.1953, pp. 1–2, here: p. 1.

laboratory and the vast reserves for scientific material” but the very locus where France could prove the superiority of Western civilization through science. Moreover, the colonial situation was marked by a sort of “colonial nervousness” expressed in constant fear that the “smallest incidences” were given the highest symbolical weight to the detriment of the already fragile relationship between the “Orstomiens” in Paris and the members of the CSRS.

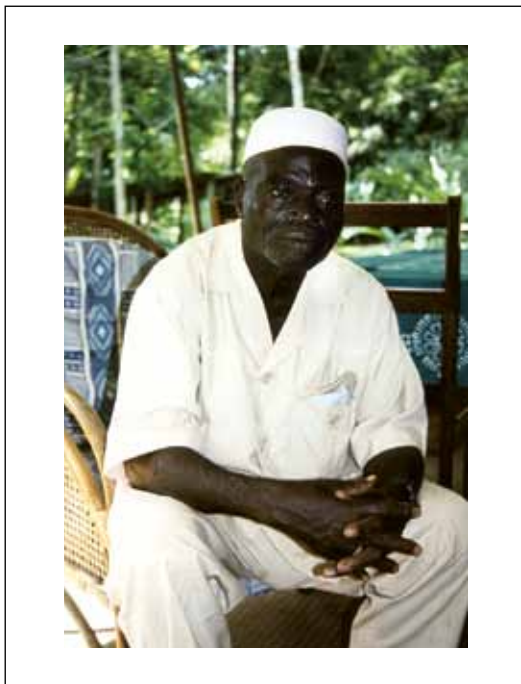
The success or failure of field science was not just a balancing act on the political tightrope but also largely dependent on African “intermediaries.” The central figure in the activities of the CSRS was Boukary Porgo, who was one of the many labor migrants coming from Haute Volta to the neighboring country. Boukary Porgo had been contracted by a French plantation company at Adiopodoumé when he was assigned to the CSRS, for which he has been working for over thirty years. Often called “the boy” by Swiss scientists, Boukary Porgo skillfully performed the different functions as gardener, mechanic and laboratory assistant. His presence was indispensable especially on scientific expeditions where he acted as “cultural broker,” introducing the Swiss scientists to rural village dignitaries. His presence and support was more taken for granted rather than the subject of profound reflection. André Aeschlimann’s acknowledgement, writing that “Thanks to you, I was able to observe all the mammals of Côte d’Ivoire (insectivores and rodents included)” is a rare moment in the sources and credentials of a delayed gratification.²² Swiss scientists relied heavily on Boukary Porgo’s technical skills, his knowledge of local geography and his ability to speak different local dialects but they were keen to artificially maintain a rigid boundary between science and knowledge. This attitude was shared by ORSTOM in that they too constantly redrew the boundaries between French science and African knowledge on which the success of the scientific project finally depended. For instance, botanical explorations of Ivoirian forests would have fallen short without the help of the young botanist Laurent Aké Assi, son of Aké Anga who had already assisted French botanist Auguste Chevalier in classifying Ivoirian forests.²³ However, ORSTOM chose a different approach to the CSRS as far as the training of young African scholars was concerned. French colonial ideology of remolding African individuals according to French “civilizing” standards and a larger budget than that of the CSRS allowed them to “cultivate the intrinsic qualities of certain black individuals and to develop them into veritable observers and researchers.”²⁴ It can be argued that in the

22 (SCNAT), GA SANW 830, Centre Suisse, Varia, Korrespondenz, Geschichte der Station 1981–1987, André Aeschlimann to Boukary Porgo, 22.12.1986, pp. 1–2, here: p. 1.

23 Laurent Aké Assi has become one of the most renowned specialists of African botany today. According to Auguste Chevalier “Ake Assi [...] connaît actuellement par leur noms scientifiques et vernaculaires (en divers langues) environ 2000 espèces végétales de la Côte d’Ivoire et ce qui est mieux encore, il sait les reconnaître en forêt dense ou le mélange des arbres, arbustes et lianes est pourtant déconcertant. Son savoir et son sens de l’observation tiennent en vérité du prodige”, see: Auguste Chevalier, Un jeune africain prodige. Aké Assi, préparateur à l’Institut biologique d’Adiopodoumé (Côte d’Ivoire), in: *Revue Internationale de Botanique Appliquée et d’Agriculture Tropicale*, 1948, p. 179.

24 Ibid.

relationship between France and the African country, technological knowledge was the basic mechanism for social and economic mobility and one of the main features in the transition from colonial domination to a set of political and social rules that would account for the laws of the postcolony. Political consideration never ranked high in the reflections of the Swiss scientists. Doing science was constructed as a neutral and highly de-politicized activity and it is striking to what extent the colonial situation was taken for granted.



Boukary Porgo, source: Fonds André Aeschlimann

THE ECLIPSE OF POLITICS

On a personal and professional level, the boundaries between the fields of science and politics were porous. Hansjörg Huggel, who became director of the CSRS in 1955, was easily able to replace Eugen Wimmer in his function as honorary consul during a stay of recovery in Europe. This did not mean, however, that science was understood as a political practice. For a better understanding of the power of knowledge production in the colony and the eclipse of politics therein, it is necessary to briefly turn to André and Lily Aeschlimann, whose directorate coincided with the date of Ivoirian independence (1959–1962). André Aeschlimann was born in Geneva and raised in Delémont in the Western part of Switzerland. After high school he moved to Basel where he took courses in zoology at the University. Aeschlimann was fascinated by Geigy's concept of medical parasitology that combined the zoological studies of parasites with the more practical-oriented research on health and

disease. Aeschlimann graduated with a doctoral research on the embryonic development of *Ornithodoros moubata*, the vector of African tick-borne relapsing fever.²⁵ Once in Basel, he was immediately attracted by the tropical world and especially Africa. Occasionally he rummaged through the displays of African art offered by some of the second hand shops in town and he followed the ethnographic courses offered by Alfred Bühler on New Guinea and Papua New Guinea. “I also new very well the museum’s African art collection because Mr. Bühler authorized me to see it at a time when it still was locked up in the cupboard.”²⁶ In 1958 Aeschlimann profited from a grant by the JANGGEN-PÖHN FOUNDATION to go to Ifakara for a systematic study on the distribution of ticks living in the Ulanga district.²⁷ After having returned to Basel, however, Geigy sent him and his wife Lily Aeschlimann to Adiopodoumé to take over responsibility from Hansjörg Huggel. Apart from a basic interest in tropical nature, marriage was one of the requirements in order to classify for the post of a CSRS director. “Côte d’Ivoire was not an easy place to live in,” Lily Aeschlimann recalled. There was the temperature, so unfamiliar for persons used to a European climate; there was also the period of three years which passed almost in isolation; a marriage therefore was important for the “researcher’s equilibrium.”²⁸ Lily Aeschlimann shared her husband’s fascination for the African continent. During infancy, Africa was literally sitting at the dining table.

*“I always wanted to go to Africa [...] My father had a friend in Basel whom he was in Belgium with to study French. The friend has married a Belgian whose father had a business in the Congo. My father’s friend too started business in the Congo, in Léopoldville, and each time when he came to visit us in Basel, I begged: “Uncle Charly, I want to go to the Congo with you!” but he always answered: “That is nothing for little girls.”*²⁹

The work at the CSRS was highly gendered. Mrs. Aeschlimann, who quit her job at the CLINIC SONNENRAIN, offered a helping hand at the laboratory, she typed letters to friends and other scientists and was generally concerned with administrative issues. Her presence was especially important from the point of view of social status and representation. The social life and the many official meetings with the “Orstomiens”, as well as with African politicians, among which was one with Félix Houphouët-Boigny and his wife for instance, revealed the highly political function of the CSRS. “Quite modestly, I was the Centre Suisse’s ambassador” she asserted.³⁰

25 Aeschlimann, Développement embryonnaire d’*Ornithodoros moubata* (Murray) et transmission transovarienne de *Borrelia duttoni*. Inauguraldissertation Universität Basel, Basel 1958.

26 Interview with André Aeschlimann, 21.07.2010.

27 (FAA), André Aeschlimann, Rapport du voyage de Monsieur A. Aeschlimann au Kenya et Tanganyika, à Messieurs les membres du comité de la Fondation Janggen-Pöhn, pp. 1–2.

28 Interview with Lily Aeschlimann, 21.07.2010.

29 Interview with André and Lily Aeschlimann, 21.07.2010.

30 Ibid.

For André Aeschlimann in turn, Côte d'Ivoire was the manifestation of Geigy's double venture of combining the premises of basic parasitology with practical aspects of health and disease. "There are many species of *Ixodides* in Côte d'Ivoire that are not yet classified" he wrote enthusiastically to the president of the research commission of the SNG, Jacques de Beaumont. In a similar vein to the Swiss researchers before him, he started to compile an inventory "aussi complet que possible" of the Ivorian ticks.³¹ He discovered a yet unknown species that he soon named "*Boophilus geigy*" in fondness of his patron at the STI. Aeschlimann was fascinated by the specificities of parasitism. What were the tick's major hosts in the country and why was it that some ticks prefer one specific host while others were not selective at all? His work had also immediate practical implications. The collecting of ticks from villagers' domestic animals meant a reduction of the possibility of disease transmission and thus an immediate impact on the well-being of the African population. The image of Adiopodoumé as a confined space in areas of domestic life was counteracted by the scientific expedition and the global scope of scientific communications. During the years at the CSRS, Aeschlimann was in steady contact with other tick researchers such as Harry Hoogstraal working in Cairo or P. C. Morel in France, with whom he constantly mused about the latest discoveries in tick science. This strong orientation towards an international scientific community and the stunning continuities of French-Ivoirian relations during the 1950s and early 1960s accounted for the fact that the high tides of political movement did not affect the scientific fieldwork in Adiopodoumé nor in relations with the rural population. Like his peers, Aeschlimann only occasionally commented on the political developments.

Switzerland's reluctance to comment on political events, its taking-for-granted approach to the "social context", says much about the trajectory of Ivoirian decolonization that became more heated after 1956, ending a period referred to as "political sclerosis."³² Many scholars writing about decolonization in *Afrique Occidentale Française* (AOF) would agree that, with the "loi-cadre" of 1956 and France's new concept called "territorialization", the "political endgame had begun."³³ Instead of shifting power to the Federal Government General, each territory now had the power to administer its domestic affairs ("*services territoriaux*") while France retained control over key policy areas including foreign affairs and defense ("*services d'État*"). This distinction between the "*services d'État*" and "*services territoriaux*" had far-reaching consequences for the individual African territories because it set an end to the "culture of

31 (FAA), André Aeschlimann to Jacques De Beaumont, 27.05.1959, pp. 1–2, here: p. 1, also: Interview with André Aeschlimann, 24.01.2011.

32 Tony Chafer, *The End of Empire in West Africa. France's Successful Decolonization?*, Oxford 2002, p. 83, Yves Person, *French West Africa and Decolonization*, in: Prosser Gifford and William Roger Louis (eds.), *The Transfer of Power in Africa. Decolonization 1940–1960*, New Haven, London 1982, pp. 141–172, here: p. 143.

33 Cooper, *Africa since 1940. The Past of the Present*, Cambridge 2002, p. 66.

demand” and reduced the metropole’s expenditure for African welfare to a minimum. France mitigated this move through the on-going provision of aid but “*this was now foreign aid, a gift rather than an imperial obligation [...]*”³⁴ One of the underlying characteristics in the Ivorian decolonization process in the 1950s was the personalization of official politics. France’s foreign policy was not just shaped by self-proclaimed “*shadow men*”, such as Jacques Foccart who, as secretary of African affairs between 1961 and 1974, basically held African policy in his hands, but also by France’s constant distinctions between “*real*” African friends and the more doubtful ones.³⁵ In this partition of the African world, French anti-communism played a decisive role. As it seems, Félix Houphouët-Boigny belonged to the former group among his peers and was most susceptible to French advances. In 1950 he met with René Pleven and François Mitterrand and agreed upon the following: in exchange for a bigger influence for Africans over the course of the colony and progressive reforms, he broke openly with the French Communist Party and renounced “*the militant style of anti-colonial activism that had come to characterize the RDA.*”³⁶

Houphouët proved his devotion to the ideal of a broader cooperative community with France during the empire-wide constitutional referendum of 1958, when the African population decided on the possibility of building a federation of African states or immediate political independence. As Aristide Zolberg has shown, Houphouët’s arguments in favor of a Franco-African community were based on economic considerations as well as problems of national unity. He was convinced that, without French economic support and French foreign investment, a decent standard of living of the whole Ivorian population would never be attained.³⁷ Many of the PDCI members working in Africa rather than in France, however, were not all too convinced about postponing immediate independence but Houphouët’s power over the party was such that they would not have dared to either raise their concern publicly or to point to the party leader’s coercion employed during the referendum campaign.³⁸ The declaration of Ivorian independence on August 7th, 1960 was then perhaps not the meaningful event that it was for Guinea, whose population in the referendum of September 28th, 1958 voted for immediate independence and against a constitution in which they saw their voices overruled by French will.³⁹ In the case of Côte d’Ivoire, the post-colonial pact between the African country and France did not leave much

34 Ibid., p. 82.

35 Alexander Keese, First Lessons in Neo-Colonialism. The Personalisation of Relations between African Politicians and French Officials in Sub-Saharan Africa, 1956–66, in: The Journal of Imperial and Commonwealth History, Vol. 35, No. 4, 2007, pp. 593–613, here: p. 599.

36 Timothy C. Weiskel, Independence and the Longue Durée. The Ivory Coast “*Miracle*” Reconsidered, in: William Roger Louis and Prosser Gifford (eds.), Decolonization and African Independence. The Transfers of Power, 1960–1980, New Haven, London 1988, pp. 347–380, here: p. 370.

37 Aristide Zolberg, One-party Government in the Ivory Coast, Princeton, New Jersey 1969, p. 235.

38 Elizabeth Schmidt, Anticolonial Nationalism in French West Africa. What Made Guinea Unique?, in: African Studies Review, Vol. 52, No. 2, 2009, pp. 1–34, here: p. 20.

39 Ibid., p. 6.

open political space for those who assumed political responsibility over the African country. The language of cooperation has replaced the former discourse of assimilation and the *“vision of a mutually beneficial relationship, in which independent Black African states would benefit from French support and cooperation in return for their support for France in the global arena, was to be the foundation stone for the maintenance of close Franco-African relations in the post-colonial era.”*⁴⁰

The smooth transition that would lead to a Franco-African family and France’s retained influence over the fate of Côte d’Ivoire absorbed Swiss political consciousness both in Switzerland and in Adiopodoumé. As has been shown before, the Swiss scientific activities of ordering the empire and filling the knowledge gaps still existing in the field of tropical parasitology was highly political because it sustained the colonial order based on social hierarchies. Most important for Switzerland’s shift towards development aid in the 1960s was the fact that the Swiss scientists emerged as new and highly esteemed *“development experts”* after a decade of knowledge production in Côte d’Ivoire. Their expertise on *“African problems”* had its roots in their efforts to order the natural world. Development was then perhaps not so much an intellectual concept as it was directly derived from the practices of African fieldwork. To quote once again André Aeschlimann:

AA: *“[...] it is clear that from the moment I started the inventory of ticks in Côte d’Ivoire and to deal with these animals that transmit diseases [...], I think that with this scientific work I did development work, I was convinced by this and I still am today.”*

I: *“Development thinking derives from scientific practice?”*

AA: *“It comes from practical work and it is the problems which impose upon you and not you who impose on the problems.”*⁴¹

As André Aeschlimann suggested, it was not so much the external factors that shaped Swiss scientific practices on the ground but the production of knowledge became an instrument for the transformation of African societies. The strategies of de-politization were at play here too but before we turn to the period of Swiss development aid and the role of the STI in shaping official development policies in the 1960s and the 1970s, we should once again focus our attention on the practical aspects of science which prevailed in Tanganyika.

40 Chafer, *The End of Empire in West Africa*, p. 183.

41 Interview André Aeschlimann, 24.01.2011.

THE PERMANENT EXPEDITION: TANGANYIKA 1954–1961

THE EXPEDITION OF 1954

Leaving the CSRS under the tutelage of Jean-Georges Baer, Rudolf Geigy found in Tanganyika a vast area most suitable to his research interests. In 1949 already he was impressed by the many research possibilities the territory offered when, as a guest of the Capuchin mission in Ifakara, he worked on the mechanisms of transmission of trypanosomiasis, malaria, relapsing fever and chiggers.⁴² At that time the director of medical services, P.A.T. Sneath introduced him to Charles Swynnerton and John Ford working in Old Shinyanga, as well as to H. Fairbairn in Tinde whom we encountered as one of the sleeping sickness officers in the first chapter and with whom Geigy stayed a couple of days.⁴³ Five years later, Tanganyika was again host to a Swiss scientific expedition headed by Geigy. In addition to the director of the STI, Hermann Mooser, as well as Thierry Freyvogel, one of Geigy's students at the STI, joined the group. While the latter worked on questions of the impact of high altitudes on the course of malaria infection, Geigy and Mooser resumed the research on African relapsing fever they had already started in 1949.⁴⁴

Investigations in African relapsing fever were especially attractive because the knowledge about the mechanisms of transmission as well as the epidemiology of the disease were still in their infancy. In fact the disease, which is caused by the pathogen called *Borrelia duttoni* and transmitted by the tick (*Ornithodoros moubata*), has long been considered as a cinderella among other “*tropical diseases*.” While human trypanosomiasis ranked high on the British research agenda and consumed the lion's share of British research funding, relapsing fever went almost unnoticed. At the beginning of WORLD WAR II, Patrick Buxton, entomologist at the LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE (LSHTM) and supervisor of Thomas Nash's Ph.D. research, felt that “*the whole subject is one of the most serious gaps in medical entomology*.”⁴⁵ Fifteen years later the appalling situation remained unchanged.

*“We have of course only too little detailed information on the incidence of the disease in Tanganyika in the past – my own feeling about this being that it is possible better to adopt the point of view that relapsing fever has been widespread in the country for a very long time and to leave it at that, knowing that the records are pretty rough [...]”*⁴⁶

42 (TNA), 450/87/20, Scientific (Tanganyika) Expedition by Profs. R. Geigy and H. Mooser and Dr. Freyvogel, 1954–1956, Rudolf Geigy to M. Meredith, 17.02.1954.

43 Ibid.

44 Ibid., Rudolf Geigy, Hermann Mooser, Programme of work for the scientific Tanganyika Expedition in 1954 of Profs. Geigy (SWISS TROPICAL INSTITUTE, Basle,) and Mooser (INSTITUTE OF HYGIENE, University of Zurich).

45 (TNA), 450/66/Infectious Diseases, Spirillum Relapsing Fever 1948–1957, P. Buxton to R. R. Scott, 01.07.1940, p. 1.

46 Ibid., G. A. Walton, 16.11.1954.

The disease had been reported in Tanganyika since the Interwar period and was usually associated with the “*unhygienic*” conditions, as well as an increased mobility of the rural population.⁴⁷ At the beginning of the 1950s, Ronald Heisch, and G. A. Walton, working at the MEDICAL RESEARCH LABORATORY in Nairobi (Kenya) however, confirmed earlier observations that *Ornithodoros moubata* were not only to be found in human dwellings but also in the burrows of small wild mammals such as porcupines, antbears and warthogs.⁴⁸ If this tick existed in the wild, then the most pressing research question was whether it carried *Borrelia duttoni* and whether the wild mammals served as a reservoir for African relapsing fever.⁴⁹ In addition to the experiments with different strains of *Borrelia duttoni* in white mice, it was especially the “*warthog hypothesis*” that Rudolf Geigy and his collaborators set out to answer. Geigy’s research objectives in Tanganyika not only revealed a shared interest between his group and the British researchers working in East Africa, but more so the fact that tropical disease was understood within a larger epidemiological context: the STI was not just interested in the repartition of tropical parasites or narrowly perceived ways of disease transmission but in the complex interplay between the parasites’ human and animal hosts, as well as the impact of the natural environment.

Expeditions of such scope implied a huge effort in logistics and could not have been carried out without the help of the Capuchin mission in Dar es Salaam and Ifakara. From the mission headquarters, Pater Oswin supported the STI with the organization of import licenses for the scientific material and dispelled the British concerns that the Swiss would conduct “*human experiments*” with the African population.⁵⁰ The Capuchin mission was also crucial in providing the expedition team with African personnel. Most of the “*boys*” who were seconded to the expedition team attended the mission school at Ifakara and were selected out of the classroom. Ambros Mganda, who was already recruited in 1949 and who would become one of the STI’s closest collaborators for the years to come, recalls the moment

47 Ibid., I. W. Mackchikan, 16.04. 1956.

48 R. B. Heisch, W. E. Grainger, On the Occurrence of *Ornithodoros moubata* Murray in Burrows, in: *Annals of Tropical Medicine and Parasitology*, Vol. 44, 1950, pp. 153–155, R. B. Heisch, *Ornithodoros moubata* (Murray) in a Porcupine Burrow near Kitui, in: *East African Medical Journal*, Vol. 31, 1954, p. 483, G. A. Walton, *Ornithodoros moubata* in Warthog and Porcupine Burrows in Tanganyika Territory, in: *Transactions of the Royal Society of Tropical Medicine and Hygiene*, Vol. 47, 1953, pp. 410–411.

49 Rudolf Geigy, Hermann Mooser, Untersuchungen zur Epidemiologie des afrikanischen Rückfallfiebers in Tanganyika, in: *Acta Tropica*, Vol. 12, No. 4, 1955, pp. 327–345, here: p. 40.

50 Provincial Archive Dar es Salaam (PADSM), Pater Oswin to Rudolf Geigy, 01.04.1954, p. 1.

when Geigy entered the classroom and pointed at him because he was skinny and easily able to enter the warthog holes.⁵¹ Injecting white mice with brain liquid drawn from the warthogs could not confirm the hypothesis according to which the animals were reservoirs of relapsing fever in Ulanga district.⁵² For Geigy, who was by then nicknamed “*Bwana Ngiri*” (Mr. Warthog) by the local population, the expedition was nevertheless a success because it set an end to the erratic character of Swiss knowledge production in East Africa. In 1954 Karl Schöpf, the medical superintendent of the ST. FRANCIS HOSPITAL, came up with the idea of offering Rudolf Geigy a space for the establishment of his own scientific laboratory in a wing of the ST. FRANCIS HOSPITAL under construction in Ifakara.⁵³ The idea was also well received by the head of the Swiss Capuchin Mission, Edgar Maranta, who was aware that many of his brothers and sisters in Ifakara got their introduction to the tropics through the “*General Tropical Course*” offered by the STI in Basel. The laboratory space for the scientists of the STI should not be interpreted as a mere returned favor however. The later archbishop Maranta was well aware that his mission society would probably also benefit from such research activities: in a letter to Pater superior Hieronymus Schildknecht, he wrote

*“The mission society has a strong interest in this field laboratory. Given the case that it is successful in fighting malaria, relapsing fever or sleeping sickness, then we also will benefit. It seems to me that the mission too could contribute something towards scientific research [...]”*⁵⁴

At the end of the expedition, Geigy confronted his student Freyvogel as to whether he could imagine himself with a future in the tropics and to build up what would become the STIFL. The young and talented Freyvogel, for whom the African territory offered the possibility to “*achieve many new things in as different scientific branches as biology, botany, zoology, ethnology and psychology*”, did not refuse Geigy’s offer. Before moving into the patres house in Ifakara, however, Freyvogel spent some months in London with the famous malariologist Percy C.C. Garnham, who acquired a firm place in the annals of the history of malaria through his detection of the liver stage of the malaria parasite.⁵⁵

51 Interview with Ambros Mganda, 09.01.2009.

52 Geigy, Mooser, Untersuchungen zur Epidemiologie, p. 341.

53 Fonds Thierry A. Freyvogel (FTAf), Thierry Freyvogel, Tagebuch, No. 1, Expédition de l’Institut Tropical Suisse de Bâle au Tanganyika, Ifakara Mai 1954 – Juli 1954, pp. 1–85, here: p. 4.

54 Diocesan Archives Kwirowo (DAK), Parish Ifakara 1956–1969, Edgar Maranta to Pater Hieronymus Schildknecht, 16.01.1958. I am thankful to Marcel Dreier for this quotation.

55 H. E. Shortt, P. C. C. Garnham, Pre-erythrocytic Stage in Mammalian Malaria, in: *Nature*, Vol. 161, 1948, p. 126.

As we will see later, the members of the Capuchin mission were not only actively involved in the research process itself but open enough to integrate a protestant and exponent of a worldly scientific community into their religious social life. As Thierry Freyvogel himself recalled, the regulations that structured daily life at the station were vital in providing stability in a chaotically perceived African world. Days started at 6 am with morning prayer in the nearby church; one hour later all gathered for breakfast which comprised a bowl of milk and some maize and bananas. From there, every one rushed to their highly specialized daily work: one brother was responsible for the workshop, another for cattle-rearing, a third supervised the construction of the ST. FRANCIS HOSPITAL and so on. With the sound of the church bells at noon, the brothers would gather at the church. After the prayers there was lunch with lively discussions. Lunch was followed by a siesta, at 3 pm there was another opportunity to have a cup of coffee, after which everyone would once again take over his daily tasks. At 6 pm dinner was served which was normally extended into an informal gathering on the “baraza” until at 10 pm the generators went off and the mission station disappeared into darkness.⁵⁶

MALARIA AND THE “LABORATORY OF PROGRESS”

Scientific work did not enjoy the same predictability that the Catholics could achieve for themselves through the structuring of their missionary lives, but was constantly destabilized through the unpredictability of the “*African field*.” Freyvogel travelled to Ifakara with two pressing research questions in mind: firstly, he wanted to investigate the impact of high altitudes on the course of malaria infection and secondly, and more generally, he was eager to acquire a more in-depth understanding of mosquito behavior. This research program fitted well into the general research setting of the STI and was closely tied to a larger group working on malaria research in Basel. In the 1950s and thanks to Alexander von Muralt – in charge of the research laboratories on the Jungfrau Joch in the Bernese Alps – scientists from the STI were expanding on the assumption whether or not high altitudes had an impact on the course of malaria in chicken (*Plasmodium gallinaceum*).⁵⁷ Avian models were key to malaria research from the 1930s onwards until 1948 when the rodent malaria *Plasmodium berghei* superseded *Plasmodium gallinaceum* as one of the most productive models in malaria research.⁵⁸ *Plasmodium gallinaceum* was especially attractive because of the availability of its host as well as its adaptability to various numbers of different hosts. Over time, avian malarias became the blueprint for mapping the

56 Interview with Thierry A. Freyvogel, 21.01.2010.

57 Adelheid Herbig-Sandreuter, Untersuchungen über den Einfluss des Höhenklimas auf Hühnermalaria (*Plasmodium gallinaceum* Brumpt), in: Acta Tropica, Vol. 10, No. 1, 1953, pp. 1–27, Freyvogel, Zur Frage der Wirkung des Höhenklimas auf den Verlauf akuter Malaria. Malaria in tiefer und mittlerer Höhenlage. Untersuchungen in endemischen Gebieten Tanganyikas, Ph.D. Study University of Basel, Basel 1955, Rudolf Geigy, Thierry Freyvogel, On the Influence of High Altitudes on the Course of Infection of Chicken Malaria (*P. gallinaceum*), in: Acta Tropica, Vol. 11, No. 2, 1954, pp. 167–171.

58 Slater, War and Disease, p. 41.

disease in humans. Freyvogel's work in Ifakara then consisted of a double move: firstly, he transferred the "experimental system" (Hansjörg Rheinberger) applied in the Bernese Alps and the STI to the rolling hills of Ulanga district and secondly, he exchanged chickens with primates. However, this transfer proved to be difficult. The experimental work with primates, especially, was a delicate endeavor. In order to make the animals more prone to malaria infection, Freyvogel had to operatively remove their spleen and to infect them with *Plasmodium cynomolgy* – a special strain he received from London. Freyvogel's experimental work was deeply anchored within the local society of Ifakara. The monkeys he received were captured by Ifakara's inhabitants, after they had been informed about the Swiss scientists needs during mass services.⁵⁹ At the operating table, Freyvogel was assisted by African helpers "some of whom were not clumsy at all. My carboy learnt to anesthetize the monkey while I was performing the operations. Another one has now reached the stage that I can dare to stay away from the laboratory in the case of sickness or – what will be hopefully more often the case – in order go on business travels."⁶⁰ Despite all this valuable assistance, a liver infection of the primates could never be attained. Additionally, the logistical problems inherent in shifting the animals to higher spots on the surrounding mountains and keeping them in captivity, turned out to be too challenging to crown the experimental work with success.

Studying mosquito behavior – the second item on his research agenda – was no less troublesome. Despite the numerous breeding places of *Anopheles gambiae* that Freyvogel encountered in Ulanga's wilderness, the mosquitoes could hardly be bred under laboratory conditions. Day after day he visited the houses of Ifakara's inhabitants in order to collect the mosquitoes abundant in the tattered bed-nets hanging over the quarters. He brought them into his lab, as well as the larvae he found in the many wells spread out between Ifakara and Kilombero river. But they just did not reproduce.

*"There was a time when I thought that probably it was because I fed them on animal blood instead of human blood and so I went to the laboratory during nights and let them draw my blood but the damned *Anopheles gambiae* just did not want to reproduce. Still today I don't know why this was the case. It is just not easy to breed *Anopheles gambiae* under laboratory conditions."⁶¹*

59 (FTAf), Thierry Freyvogel, Lettres d'Ifakara, 19.07.1956, p.2.

60 Ibid.

61 Interview with Thierry A. Freyvogel, 21.01.2010.



Leprosy patients help constructing the SWISS TROPICAL INSTITUTE FIELD LABORATORY (STIFL), source: SWISS TROPICAL AND PUBLIC HEALTH INSTITUTE (SWISS TPH)



Thierry Freyvogel and his laboratory assistants, source: SWISS TROPICAL AND PUBLIC HEALTH INSTITUTE (SWISS TPH)

One of the reasons for the difficulties encountered was the simple fact that Freyvogel's activities ran parallel with the construction of the physical laboratory space. Supported by the Capuchins and "African assistants", the construction went ahead at a slow pace given the fact that most of the building material had to be shifted from Dar es Salaam to Ifakara and because the climatic conditions in Ifakara foiled the whole endeavor at times. For Freyvogel, Ifakara was not just the building site for STI's future headquarters in field research but the "living laboratory" where the African's capability to learn and to adopt Western rationality and technology could be studied. He always declared the training of Africans as one of his foremost concerns.⁶² Point of reference for his musings about whether the seeds of Western rationality would germinate on an African soil was Europe and the cultural preconceptions widespread on the continent. On one occasion for instance Freyvogel came across the article "The Black Antagonism" written by psychoanalyst Fritz Morgenthaler and published in the cultural magazine "DU". Morgenthaler was one of the founding fathers of "ethno-psychoanalysis" and gained wide recognition through his book "Die Weissen denken zuviel", co-authored together with Paul Parin and his wife Elisabeth (Goldy) Parin-Matthèy,

62 (FTAF), Lettre d'Ifakara, 26.03.1956, p. 1.

first published in 1963.⁶³ In the DU article, Morgenthaler proffered the argument that Africans cannot be trained but only be drilled. Freyvogel disagreed: his own experience working with African assistants on the operating table as well as during the construction of the laboratory proved the contrary. As he contended:

“One of my assistants wears a pith helmet only when we are working under the burning sun for hours. So, he has obviously understood the meaning of this hat even though its use has not been recorded in the tradition of the local tribes. Many more examples of this ability to learn could be added even where abstract thinking is involved. How then can the existence of Julius Nyerere, the leader of the Tanzanian African National Union, be explained? It is not to deny that Africans are deeply rooted in their traditional beliefs but there is no doubt either that their impact falters. I think that one of the reasons which deny Africans access to abstract thinking lies in the fact that most of them live in a “me-you-relationship” with the natural world, whereas we are used to giving weight to a “subject-object-relationship. For Africans, things are imbued with life; they have their own will and temper. For them, things cannot easily be manipulated as we are used to doing.”⁶⁴

It is not without a certain irony that Freyvogel invoked the wearing of one of the most telling symbols of colonial rule as a benchmark according to which Tanzanians would be able to adapt Western technologies and finally prove to be mature for political self-determination. Freyvogel steadily related his observations to the wider political events happening on a global scale. He was especially interested in the question about to what degree Europe could serve as a future model for African development. Europe’s influence, Freyvogel was sure, could only be maintained through a moral and spiritual renewal at home. A telling indicator for a post-independence world order, however, was also the colonial government’s efforts so far in the “*development*” and “*up-rising*” of the African population. It is here that the colonial government shipwrecked impressively. While Freyvogel praised the missionaries’ long-standing commitment and dedication in the material and moral improvement of the African countryside, he was shocked by British administrators’ indifference towards the development of “*their*” territory. Ironically he noted in his diary: “*The administrators’ lack of imagination and initiative is really admirable and it is annoying to see how much money is wasted just in order to prevent budget cuts for the next year. The different mission societies are doing much more*

63 Paul Parin, Fritz Morgenthaler, Goldy Parin-Matthèy, *Die Weissen denken zuviel. Psychoanalytische Untersuchungen bei den Dogon in Westafrika*, Zürich 1963.

64 (FTAf), *Lettre d’Ifakara*, 05.08.1957, p. 1.

for education and training [of Africans] than does the colonial government.”⁶⁵ Freyvogel’s comments on late colonial policies have to be interpreted against the backdrop of a rising nationalist movement in Ulanga district during the 1950s. Even though TANU only slowly gained a foothold in the district, the many signs announcing political turmoil could be detected; some of those did not escape Freyvogel’s pronounced sense for political atmospheres. The 1950s not only witnessed the arrival of a new generation of administrators and the replacement of the ideology of “indirect rule” through the new concept of “local government.” The decade was also marked by the district dwellers’ claim for higher wages and a series of strikes that according to Freyvogel escalated into a downright “strike-mania.”⁶⁶ Even though most of what was left of the political bargain fell short of the protesters’ expectations, the political movement had an impact on the organization of missionary work in Ifakara. In 1957, the mission raised the wages of their workers while at the same time reducing the working days from five to four as well as discharging the “dispensable workforce.”⁶⁷ Political consciousness impaired mission life on different scales and levels. On several instances, the mission witnessed their buildings being set on fire intentionally, Pater Meinhard Inauen was harassed after having intoned a hymn on the virtue of work during mass services and at a TANU meeting held in 1960, the attendees criticized the fact that African women were treated by “dressers.”⁶⁸ In a striking reversal of the Indian community’s claim for better health services in the mid-1930s, it was now the African community which was no longer ready to accept the mission’s unchallenged presence in the district and the economic discrepancies that existed between Africans and the Indian community. Without taking the point too far, the Capuchin mission deployed several strategies to face the political development in the district, some of which seemed more progressive than others from today’s vantage point. One of the former was the promotion of Capuchin-trained Elias Mchonde, who in 1956 was named auxiliary bishop for Dar es Salaam and whose election was accompanied by Maranta’s admonishing words that “If we want to have an African Church, then we must also have African clerics and African bishops. Otherwise, the Church remains a foreign body, and that we do not want.”⁶⁹

65 (FTAF), Freyvogel, Tagebuch 1, pp. 70–71.

66 Ibid., Freyvogel, Lettre d’Ifakara, 18.12.1957, p. 1.

67 Ibid., Freyvogel, Lettre d’Ifakara, 19.02.1957, p. 1.

68 Fonds Fritz Haerdi (FFH), Fritz Haerdi, Tagebuch 3, 09.02.1959, Tagebuch 2, 29.01.1959 and Tagebuch 5, 07.07.1960.

69 Cited in: Lorne Larson, A History of Mahenge (Ulanga) District, p. 331.

The dawning age of political nationalism towards the end of the 1950s had a strong international dimension. As Ulrich Lohrmann observed, the period between 1954 and 1957 was the high tide of discussions between Julius Nyerere's TANU and UN officials.⁷⁰ In these interactions Nyerere fostered his position as unchallenged leader of TANU. Moreover, he emerged as one of the most credited and trusted African politicians in the West and sparked off discussions within the UN about when and under what conditions the Trust Territory should become independent within a time frame of about 20 to 25 years.⁷¹ Freyvogel shared the admiration for Nyerere's "education" and "modesty" with a large number of Swiss politicians and scientists. Nevertheless he regarded the planned schedule towards Tanganyikan independence as unrealistic and as one of the UN decisions that was taken without sufficient knowledge about local realities:

"Anyway I would be blind if I did not admit that the country is undergoing a huge and accelerating development. I am also curious to see whether or not the country will be independent in twenty-five years as planned and how the Africans will rule themselves. I think this is one of UN's objectives that had been decided upon on a thin body of knowledge. Given the fact that intellectually even the Europeans and Americans could hardly cope with the scientific and technological progress, becoming more and more slaves of their own innovations, how could one expect the Africans to be able to adapt to our culture within sixty-five years so as to be competitive as independent states? On the other hand I am very interested to see what the Africans are going to do with our culture by which they are constantly being confronted now. As far as one can retrace the history of Black Africa, the Africans have always brought home elements from other continents, have assimilated all the intruders and transformed these imported cultures into something new and typical – qui vivra, verra."⁷²

According to Freyvogel, the measure of whether or not the country was "ripe" for independence depended on Tanganyikans' ability to adapt to Western culture and to master Western technology. However, the relationship between the "West" and the "rest" has always been more complex and multi-faceted than would fit into a model of one-way diffusion of Western science to countries of the Third World implicit in the writings of George Basalla and others.⁷³ The transfer of Western scientific models to the tropics has not always yielded the results that Freyvogel's fieldwork suggested. Swiss scientists also extensively borrowed from "local knowledge" for which Fritz Haerdi is probably the best example.

70 Ulrich Lohrmann, *Voices from Tanganyika*. Great Britain, the United Nations and the Decolonization of a Trust Territory, 1946–1961, Berlin 2007, p. 545, Cranford Pratt, *The Critical Phase in Tanzania 1945–1968*. Nyerere and the Emergence of a Socialist Strategy, Cambridge 1976.

71 Lohrmann, *Voices from Tanganyika*, p. 547, Susan C. Crouch, *Western Responses to Tanzanian Socialism, 1967–83*, Aldershot 1987, Ali A. Mazrui, *Tanzaphilia*, in: *Transition*, Vol. 31, 1967, pp. 20–26.

72 (FTAF), Freyvogel, *Lettre d'Ifakara*, 08.07.1956, pp. 1–2.

73 Basalla, *The Spread of Western Science*, Ilana Löwy, *Yellow Fever in Rio de Janeiro and the Pasteur Institute Mission (1901–1905)*. The Transfer of Science to the Periphery, in: *Medical History*, Vol. 34, 1990, pp. 144–163.

THE PITFALLS OF LOCAL KNOWLEDGE

Africans were not just executors of scientific instructions or passive study-objects whose behavior in building up field stations provided a glimpse of Europe's future impact on the African continent. As has been shown, Freyvogel's work was deeply embedded within the fabric of local village life. Villagers provided him with the vital study material and laboratory assistants were crucial during operations and in the construction of the lab space. But still, medical research did not allow for an extensive interchange between different knowledge systems. Freyvogel's was an attempt to show how western malaria models work in the tropics and the idea of the laboratory – however destabilized through the tropical environment – derives from a Western idea of the very locus of scientific production. The extent to which scientists navigated between different knowledge systems was very much determined by the scientific discipline practiced on the ground. The botanical studies of Fritz Haerdi, arriving in Ifakara in 1958, drew extensively on local knowledge.

Haerdi's investigations on the botanical aspects of "*traditional healing*" had their origins in a list that bore a double inscription: the local names and application of over one hundred medicinal plants as well as the weakness of the mission medical services in the district. The list had been compiled by the Baldegg Sister Arnolda Kury, who was somewhat misty-eyedly referred to as the pioneer of the Swiss medical services in Ifakara. When "*Sister Arnolda*" (as she was called colloquially) started her work as a midwife in Ifakara in the 1920s, the health infrastructure was still very rudimentary. "*Fearless and no matter whether night or day, she pedaled, walked or waded to the houses of the women giving birth and slowly she acquired the unshakeable trust of the Christians, Muslims and heathens.*"⁷⁴ Arnolda's iconographers awarded her with all the attributes of a saint: she attended the birth of almost two generations in Ulanga district; she put in a good word for everyone and all those suffering from leprosy and tuberculosis enjoyed her special affection.⁷⁵ On her tours through the homes of the women in labor or to the sick, she was accompanied by Hermes Mlaganile who had already served as a "*dresser*" under the German colonial administration.⁷⁶ Given the scarcity and the limited impact of western medicine, Arnolda Kury informed herself about the properties of the medicinal plants and integrated the local "*vernacular knowledge*" into her own treating devices.⁷⁷ Over the years her compendium listed over 100 medicinal plants with

74 (FTAF), Freyvogel, Lettre d'Ifakara, 04.09.1962.

75 Ibid.

76 Interview with Fritz Haerdi, 12.11.2010.

77 The notion "*vernacular science*" is from Helen Tilley and suggests "*the translation and, more important, appropriation of select dimensions of vernacular knowledge into scientific worldviews*", see: Tilley, *Global Histories, Vernacular Science*, p. 117.

their respective local names.⁷⁸ While local “*traditional knowledge*” travelled between different epistemologies, the compendium itself travelled from Arnolda Kury into the hands of Rudolf Geigy, who himself assigned Fritz Haerdi to start with an exact classification of medicinal plants in Ulanga district. Haerdi was a pharmacologist by profession. His studies in Tanganyika were financed by J. R. GEIGY AG which had an interest in nature’s chemical properties. Haerdi occupied the ambivalent space between global expectations and local negotiations, where “*legitimate*” scientific interests could easily turn into mere extraction of knowledge:

“You must see, until that moment no one has yet made an inventory of what belonged to the field of traditional medicine. I just arrived at the right moment where you still could worm the information bit by bit from the population. Later, with the rising nationalism it was much more difficult. But when they [the Africans] started accusing the West of stealing their things – which is not true of course – I was no longer in Ifakara.”⁷⁹

However, the process of the appropriation was never a “*worming*” of information before nationalist accusations set in, but part of a complex process of negotiations between the Western scientist and his African assistants. Hermes Mlaganile was as crucial for Haerdi’s botanical studies as he was for Arnolda Kury before. He was the “*door opener*” because he knew everyone and everyone knew that he collaborated with Sister Arnolda. Hermes introduced Haerdi to the traditional healers working in the region and to a bunch of people familiar with botanical knowledge. They were equally vital in assisting Haerdi on his expeditions through the country. As he himself recalls, Haerdi would never have left the mission station without someone who could repair his car in case of a breakdown or who was familiar enough with the natural environment to avoid the encounter with wild animals. On the one hand, intermediaries such as Hermes Mlaganile occupied a powerful position within Ulanga’s society given their ability to travel and to mediate between different epistemologies. On the other hand in turn, their close relationships with the Europeans rendered them vulnerable to all sort of accusations. On November 3rd, 1959, one of Haerdi’s collaborators was attacked by a group of armed villagers from Ilungwa. He was accused of having made an agreement with vampires and his arrival at the village could only be explained by his intention to kidnap people. Similar vampire stories had already been noticed by Freyvogel who reported about the people’s belief about Europeans

78 Haerdi, Die Eingeborenen-Heilpflanzen des Ulanga-Distriktes Tanganjikas (Ostafrika), in: Acta Tropica (Supplementum 8), Basel 1964, p. 9.

79 Interview with Fritz Haerdi, 12.11.2010.

drawing their blood in order to fuel their airplanes back in Europe. Historian Luise White invited us to interpret such rumors not in the first place as African “superstition” but as a glimpse on “the world of power and uncertainty in which Africans have lived in this century. Their very falseness is what gives them meaning; they are a way of talking that encourages a reassessment of everyday experience to address the workings of power and knowledge and how regimes use them.”⁸⁰

African assistants had to trade off their privileged social position derived from new sources of income through the collaboration with Europeans against a new role in their own societies where the history of the colonial encounter had been projected to. However, the Swiss scientists’ position in this complex scientific translation was also not necessarily one of strength. Haerdi’s language skills at the beginning of his stay were only rudimentarily developed and he could never be sure about what kind of information his assistants conveyed and what they concealed, whether intentionally or not. On several occasions he addressed these issues: on November 16th, 1959 for instance he noted: “Joseph once again made difficulties: he asserted not to know one specific tree even though he presented it to me several times as “dawa”[drug] before. Sometimes I am really not sure whether he tries to mess around with me or not.”⁸¹ Haerdi had no explanation for why he thought the information provided by his assistants was not always trustworthy. His strategies, however, to cope with the uncertainties of the cultural encounter were different. “Very often I double-checked the information and showed the specimens to different persons and so I got to know what it really was.”⁸² This double-checking of precarious knowledge did not prevent him, however, from mixing up different plant specimens, as he was informed by specialists in Nairobi or at Kew Gardens in GB to where he sent his collections for exact classification.⁸³ While his African assistants navigated between different local and global “knowledge systems”, Haerdi transformed his relative position of weakness into one of strength through mediating between different scientific fields. For the expeditions through rural Ulanga district were never just botanical in scope but went hand in hand with the medical treatment of the local population. On Wednesday, September 10th, 1958, Haerdi diagnosed the community of a small village in the district as mostly suffering from “worms and costiveness.”⁸⁴ A swelling of the glands was also widespread among his patients and the he was especially concerned with the treat-

80 White, *Speaking with Vampires*, p. 43.

81 (FFH), Fritz Haerdi, *Afrika-Tagebuch*, IV, 06.08.1959–20.03.1960, see entry on 16.11.1959.

82 Interview with Fritz Haerdi, 12.11.2010.

83 Ibid.

84 (FFH), Fritz Haerdi, *Afrika-Tagebuch* II, 01.09.1958–05.02.1959, entry 10.09.1958.

ment of small children.⁸⁵ Another day on his way to Kisawasawa, a small hamlet in the north of Ifakara, he stopped at the house of one of his assistant's relatives who suffered from severe pneumonia. The family members asked for medication because the patient did not seem to be in a condition to be removed and shifted to a hospital. Haerdi rushed back to Ifakara in order to get drugs but "*it is very questionable whether I can help. I will give them some instructions for a cure. Otherwise there is nothing I can do*"⁸⁶ The strategies employed by Africans and Swiss scientists were strikingly similar in coping with the uncertainties, the violence and the misunderstanding of the colonial encounter: In Haerdi's medical work the story of the vampire who draws blood in order to fuel the airplanes back home was contrasted by Rudyard Kipling's tale of the "*white man's burden*" who tries to treat patients without almost any means of doing so but just because he thought that this was expected of him. This self-ascribed role still reverberates today. As Haerdi confirmed: "*Listen, as a European I automatically was the trustworthy source of information which obliged me to do the triage [...] and I always carried enough drugs around with me and I knew what they were good for. And then you gave some aspirin knowing that it would not necessarily improve the condition but the patient was satisfied*".⁸⁷

For all those who wish to analyze the practices of science in categories of "*weak*" and "*strong*", it is safe to say that botanical and medical research in the 1950s was contested knowledge. The Swiss Capuchin mission was far from being the powerful protagonist in health care delivery but just one among many providers of health in the district. Science's strength however lay in its capability to draw from different sources of trust and legitimacy. As Fritz Haerdi has demonstrated, scientists apparently easily shifted from botany to medicine, from the study of plants to the treatment of people. Science and medicine in the 1950s was not effective in establishing a strong impact upon people nor in its ability to restore health but in the possibility to circulate people and objects on both local and global scales, which compensated for science's weaknesses on the ground:

*"As a European – and this is the case everywhere in Africa – you have to have a certain stock of things that you can deliver. It is assumed that a white person has so many skills even though this is not true, but what can you do? [...]"*⁸⁸

85 Ibid.

86 (FFH), Fritz Haerdi, Afrika-Tagebuch IV, 06.08.1959–20.03.1960, entry 01/02/03.09.1959.

87 Interview with Fritz Haerdi, 12.11.2010.

88 Ibid.

INVENTORIZING AND IMPROVING AFRICA. SWISS SCIENCE IN THE FIELD

This chapter has argued that the different social and political realities encountered by the Swiss scientists in Côte d'Ivoire and Tanganyika developed into two particular paradigms of colonial research: “*discovery*” and “*improvement*.” The first concept applies to the CSRS in Côte d'Ivoire. Unable or unwilling to join in the French project of “*valorization*” of their colony, Swiss scientists in Adiopodoumé believed they had pushed open the gates to the earthly paradise. They lived from “*hand to mouth*” as Urs Rahm recalled; they filled the lacunas of scientific research by naming and describing new species, they created scientific collections and provided Swiss scientific institutions with “*exotic*” specimens. In so doing, they prepared the ground for their scientific careers once back in Switzerland. The “*paradise metaphor*” also applies to the social realm. The context of decolonization and the nationalist agitation in Côte d'Ivoire were considered a French affair and hardly commented on.

Local networks and the process of decolonization in Tanganyika had a different impact on Swiss knowledge production in Ifakara, where the prospect of embarking on a civilizing mission seemed more feasible. One of the main characteristics of “*science in the field*” was its weakness as well as its local rootedness. Despite the cautious attempts to give rise to the laboratory as the preferred site of medical research, the field as a space of “*cultural translations*” overruled laboratory work.⁸⁹ The insecurities of field research matched the openness of the political process of decolonization in Tanganyika. In striking contrast to the “*Franco-African-Familiarity*”, which had been used as a notion for the description of France's postcolonial relations with Africa, the British neglect of Tanganyika left Swiss scientists musing about its hazy future.⁹⁰ For researchers such as Thierry Freyvogel, science became the very lens through which the “*African progress*” could be studied. As we will see in the next chapter, on the eve of Tanganyikan independence, the country became one of the favored targets of the international aid industry, among which Switzerland was not the least active.

89 Henrika Kuklick, Robert Kohler, Introduction, in: Kuklick and Kohler (eds.), *Science in the Field*, Osiris, Vol. 11, 1996, pp. 1–14, here: p. 4.

90 Lachenal, *Franco-African Familiarities. A History of the Pasteur Institute of Cameroon, 1945–2000*, in: Mark Harrison, Margaret Jones and Helen Sweet (eds.), *From Western Medicine to Global Medicine. The Hospital Beyond the West*, New Dehli 2009, pp. 441–444.

CHAPTER 4

Technoscience, Development, and Nutritional Research in Switzerland and Africa, 1960—1980

The man who creeps forward inch by inch may well arrive at his destination while the man who jumps without being able to see the other side may well fall and cripple himself Julius Nyerere

A wishful thinking is the following: if one were able to improve the nutritional conditions of pre-school children a young generation might grow up, being more intelligent and able to think about their responsibilities and to use modern methods of family planning Alexander von Muralt

THE CHARITABLE IMPULSE

This chapter is a decisive step away from the scientific practices which provided the backbone for the previously described Swiss presence in late colonial Côte d’Ivoire and Tanganyika. It focuses on the advent and rise of the development apparatus in Switzerland, the emergence of a new dispositive with its own set of rules and practices and the role played by the SWISS TROPICAL INSTITUTE (STI) and global charities within the new development paradigm. One of the new era’s main features was the strong diversification of players who strategically placed themselves – or were driven into – the web of development practices. Despite the various reasons why they did so, they all shared the belief that African societies must and could be transformed through the application of Western technoscience. The emphasis on the faith in the transformative power of DDT or the “*miracle seeds*” set in motion not only a revolution in Third World agriculture, but also the minds of “*backward*” farmers, to line them up on their march towards modernity, might have taken on the shallow traits of an argument too often repeated. It is, however, important to emphasize this because the lessons learned in the 1960s and the unaccomplished wishes of technoscience are vital for a better understanding of what happened in the 1990s, when no one would ever talk anymore of “*transforming societies*” or the “*eradication of disease*” but rather of “*improving health systems with the scarce resources at hand*” or “*cost-sharing*”, the latter almost a faith in itself.

The following pages argue that Switzerland occupied a privileged space in world politics of the 1960s, unified by the belief in technological progress and divided by ideological cleavages. The country's unsuspecting colonial past and its humanitarian reputation made Switzerland a favorite partner for new African governments to overcome "*development discrepancies*" and to embark on substantial trade relations. However, as the previous chapter has already indicated, Switzerland's possibilities to enter the postcolonial African stage were not always given but very much shaped by contingencies of colonial histories and postcolonial actor constellations. While in Tanganyika the Swiss scientists' concerns about development and modernization were followed by large-scale Swiss development projects in Tanzania, the ongoing French presence in Côte d'Ivoire inhibited such activities in the West African country. Additionally, it has to be acknowledged that the term "*Switzerland*" in the context of global development efforts needs specification. Even after the creation of the official Swiss development agencies in the early 1960s, it was the private-sector players such as the STI, the pharmaceutical industry or the food giant NESTLÉ who were among the first to engage in development practices in the African health and agricultural sectors.

"A NEW ETHIC OF GIVING"

In the 1950s the landscape of Switzerland's charitable work – traditionally the domain of private organizations – was reconfigured. The meaning of the former notion of charity was extended and development was considered a crucial instrument of Swiss foreign policy and an efficient ideological weapon in global COLD WAR politics.¹ In the 1950s financial and technical aid was limited to multilateral financial support to the *UN Development Program* (UNDP), as well as sending out Swiss expert missions to India and Nepal.² The rise of the Swiss development apparatus and the politicization as well as internationalization of development was closely related to the process of decolonization that swept over the countries of the then so-called "*Third World*." The Bandung conference of 1955, where 29 Asian and African nations unanimously opposed colonial rule and articulated their wishes of a new world order, marked a turning point in Switzerland's perceptions of global power

1 Christoph Graf, *Die Schweiz und die Dritte Welt. Die Anerkennungspraxis und Beziehungsaufnahme der Schweiz gegenüber dekolonisierten aussereuropäischen Staaten sowie die Anfänge der schweizerischen Entwicklungshilfe nach 1945*, in: *Studien und Quellen*, No. 12, Bern 1986, pp. 37–112, here: p. 89, Ulrich Kägi, *Die Schweizerische Entwicklungshilfe*, in: *Entwicklungsländer (BRD)*, Vol. 5, 1960, pp. 150–152, here: p. 150, Regula Renschler, *Die Entwicklung der Entwicklungshilfe zur Entwicklungspolitik*, in: Richard Gerster (ed.), *Die Entdeckung der Schweiz. 25 Jahre Helvetas. Jubiläumsschrift*, Basel 1980, pp. 113–123, here: p. 113, Monica Kalt, *Tiermondismus in der Schweiz der 1960er und 1970er Jahre*.

2 Holenstein, *Wer langsam geht kommt weit*, p. 49, Rolf Wilhelm, *Gemeinsam unterwegs. Eine Zeitreise durch 60 Jahre Entwicklungszusammenarbeit Schweiz-Nepal*, Bern 2012.

relations. As a country with a “*small open economy*”, Switzerland was traditionally deeply enmeshed in world trade and highly influenced by the vagaries and inconsistencies of world markets.³ With the process of decolonization, Switzerland gradually reinterpreted its restrictive policy of neutrality which – as one of the major ideological pillars of Swiss identity during WORLD WAR II – lingered on in the 1950s. Development aid was not just an answer to the awakened “*feelings of solidarity*” among large parts of the Swiss population but an instrument to surmount Switzerland’s postwar isolation at the level of world politics.

However, development was not a concept that evoked much consensus, neither with regard to its content nor the practical political implications in Switzerland’s relations with the Third World. It was made up of affirmations of solidarity and Switzerland’s “*humanitarian tradition*,” of the belief that the achievements of the Swiss welfare state after 1945 should be applied globally, and of more selfish political and economic considerations.⁴ The perhaps most widespread taken-for-granted assumption was that African, Asian and Latin American populations were living in “*poverty*” – commonly defined as a lack of material wealth. The solution to this state of deprivation was the transfer of technology to these countries as well as re-establishing firm and reliable trade relations from which would follow economic growth. The assumption of a congruency between development aid and trade relations was reflected in the institutional set-up of development aid in Switzerland. In the period before 1960, the BUNDESAMT FÜR INDUSTRIE, GEWERBE UND ARBEIT (FEDERAL OFFICE OF INDUSTRY, TRADE AND WORK, BIGA), the EIDGENÖSSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (DEPARTMENT OF ECONOMIC AFFAIRS EVD) and the ABTEILUNG FÜR INTERNATIONALE ORGANISATIONEN (DIVISION FOR INTERNATIONAL ORGANIZATIONS – part of the DEPARTMENT OF FOREIGN AFFAIRS) shared the responsibility over technical aid, which often led to quarrels about the allocation of rights and duties.⁵ This situation changed with the creation of the DIENST FÜR TECHNISCHE ZUSAMMENARBEIT (DFTZ [service for technical cooperation]) in 1960, which was placed under the tutelage of the DEPARTMENT OF FOREIGN AFFAIRS and the Amt eines Delegierten des Bundesrates für technische Zusammenarbeit [Office of a Delegate of the Federal Council for Technical Cooperation] one year later. The main architect of this new conception of development aid was Bundesrat [Federal Councillor]

3 Peter J. Katzenstein, *Corporatism and Change. Austria, Switzerland and the Politics of Industry*, New York 1984, p. 24.

4 Holenstein, *Was kümmert uns die Dritte Welt*, pp. 91–98.

5 Branka Fluri, *Umbruch in Organisation und Konzeption. Die technische Zusammenarbeit beim Bund, 1958–1970*, in: Peter Hug and Beatrix Mesmer (eds.), *Von der Entwicklungshilfe zur Entwicklungspolitik, Studien und Quellen*, Vol. 19, Bern 1993, pp. 382–39, here: p. 382.

Max Petitpierre, for whom technical cooperation was a highly political endeavor and who tried to push the pendulum from multilateral aid towards more bilateral and project-based development work.⁶ Petitpierre's visions were carried a step further with the Swiss parliament's approval of a global credit for development aid amounting to CHF 60 million over a period of three years in 1961 and the appointment of August R. Lindt, who replaced Hans Keller as a Delegierter des Bundesrates für technische Zusammenarbeit [Delegate of the Federal Council for Technical Cooperation] in 1963.⁷

As former Swiss ambassador in Washington and UN High Commissioner for Refugees, Lindt had to carefully maneuver between the concept of neutrality (in the sense of a equal treatment of Third World solicitors) and the financial restrictions that called for a selection of future beneficiaries of Swiss development aid. In the beginning, the criteria about who was most "in need" and should therefore profit from Swiss attention were not yet clearly defined.⁸ Rolf Wilhelm, one of the pioneers of Swiss development aid, joining the DfZ in 1962, recalled:

"[...] evenings [...] sitting at the round table and in front of the map of Africa, how we contemplated and considered where the best chances and the biggest obstacles would lay. What were the arguments in favor or against the several African coastal countries where also Swiss mission societies were working in? What was the position of the former colonial powers? What were the arguments in favor or against Guinea and what in the case of the Sahel country Mali? There was a lot to discuss though and I often returned home very late."⁹

In the discussions held in front of Africa's empty map, economic and political considerations did not necessarily reign over other selection criteria. Using the example of Rwanda, historian Lukas Zürcher has pointed to the degree of identification with the target population as being a vital factor to where development aid should be directed. Rwanda became

6 Ibid., p.383, Daniel Trachsler, Bundesrat Max Petitpierre. Schweizerische Aussenpolitik im Kalten Krieg, 1945–1961, Zürich 2011.

7 Rolf Wilhelm et al. (eds.), August R. Lindt, Patriot und Weltbürger, Bern, Stuttgart, Wien 2002.

8 DfZ-employee Roy Preiswerk listed several positive criteria for a possible Swiss support among which were: the special role Switzerland could play as a neutral state, the reduced scale of the territory, the geographical proximity to Switzerland, the existence of a Swiss colony in the respective country and the activity of Swiss private organization thereat, see: Roy Preiswerk, La coopération technique. Dimension nouvelle de la politique étrangère Suisse, in: Annuaire Suisse de Science Politique, Vol. 6, 1966, pp.75–97, here: p.90.

9 Rolf Wilhelm, Aus der Anfangszeit der schweizerischen Entwicklungshilfe, in: Wilhelm et al. (eds.), August R. Lindt, Patriot und Weltbürger, pp. 127-138, here: p. 129.

a showcase for Swiss development not least because the more Swiss development planners studied the “*character*” of the African country, the more Rwanda echoed back a sense of Switzerland’s own identity: a small mountainous country with modest politicians and a comparatively large agricultural sector.¹⁰ History also played its part. Third World countries with which Switzerland maintained historical ties automatically came into the focus of the DFTZ. The selection of Tanganyika as one of the focal points of Swiss development aid was justified by the many Swiss mission societies working in Tanganyika, as well as by a comparatively strong Swiss colony amounting to 650 people.¹¹ The question of who should be included as beneficiaries of development aid overlapped with the more practical one of how such policies could be implemented. In addition to the selection of “*target societies*”, there was a concentration on core topics of Swiss expertise: agriculture, dairy farming, tourism and hotel industry, banking and insurance industry, mechanical engineering and public administration, to name but a few.¹²

Two things are especially noticeable in the concept of Swiss development aid in the first years of the existence of the DFTZ: Firstly, the health sector did not range prominently within the canon of technical expertise. The improvement of people’s wellbeing was considered “*charitable work*” and not easily compatible with the new credo of the transfer of technical knowledge. Secondly, and equally important, in most of the above-mentioned core areas the DFTZ lacked the required expertise. This was acknowledged in the first place by the DFTZ itself which did not wish to challenge the many private organizations traditionally occupying the field of international solidarity, but which saw its function in subsidizing the existing efforts being undertaken by such private players as the STI. August Lindt, whose vast personal network also embraced friendship with Rudolf Geigy, was unambiguous about this point. During a meeting held with representatives of private organizations in 1963 he assured:

*“Because in Switzerland we lack the required personnel it is of vital importance to closely collaborate with all of the existing organizations and institutions such as the SWISS TROPICAL INSTITUTE or the „Institut Universitaire de Hautes Études Internationales“, as well as all the private organizations present at the today’s meeting.”*¹³

10 Lukas Zürcher, “*So fanden wir auf der Karte diesen kleinen Staat.*” Globale Positionierung und lokale Entwicklungsfantasien der Schweiz in Rwanda in den 1960er Jahren, in: Büschel and Speich (eds.), *Entwicklungswelten*, pp. 275–309.

11 (BAR), E 2200.83 (A), 1983/26, 3, B. 8.6, Dienst für technische Zusammenarbeit, Agricultural Development (Lumemo), 1962–1963, August R. Lindt, Schweizerische technische Zusammenarbeit mit Tanganyika, 04.03.1963, pp. 1–2, here: p. 2.

12 [Dodis], Notiz an Herrn Bundesrat Wahlen über Richtlinien für unsere technische Zusammenarbeit mit den Entwicklungsländern, Bern 12.02.1962, pp. 1–4, here: p. 4.

13 (BAR), E 2200.83 (A), 1983/26, B 8, 771.1, Technische Zusammenarbeit 1961-1965, August R. Lindt, “*Die bilaterale Entwicklungshilfe der Schweiz aus der Sicht des Eidgenössischen Politischen Departements.*” Referat von Dr. A. R. Lindt, Delegierter des Bundesrates für Technische Zusammenarbeit (Resumé) 28.5.1963, pp. 1–7, here: pp. 3–4.

Towards the end of the 1950s, the STI was at the forefront of Swiss development aid and about to become a strong partner of the DFTZ in planning and executing development projects especially in Tanganyika. Rudolf Geigy and his collaborators at the institute were deeply drawn into the “*Third World euphoria*” that held sway in Switzerland in the 1960s. Geigy was convinced that African decolonization ushered in a “*new era in the history of mankind*” and that the “*Western unchallenged hegemony*” in Africa would probably come to an end.¹⁴ His was a new concept of solidarity that he wanted to set apart from economical as well as religious reasoning, which until then had ranged prominently in the arguments for development aid. In a lecture held in 1963 he contended:

*“We have to see our aim in the creation of a new Ethic of Giving whereby this giving should neither be driven by political or economic considerations nor by Christian values [...] The new giving I am talking about is one that is exclusively derived from international responsibility and the motive of bringing people closer together, as has been developed successfully by the absolutely independent Red Cross through its long and established practice.”*¹⁵

Like many others too, Geigy strongly believed that the privileged West had a moral obligation to assist the “*undeveloped*” and the “*needy*” on the intricate paths towards modernity. In his publications, Geigy was however anxious not to capitalize on the hierarchies and unequal power balance inherent in this relationship. Switzerland’s assistance should take place within an “*atmosphere of trust*” and be devoid of “*pitiable dependence*” and “*submissive thankfulness*.”¹⁶ It is not suggested here that Geigy’s emphasis on a “*new ethic of giving*”, devoid of any political and economic interests, was mere rhetoric or a more or less conscious strategy to distance himself from the J. R. GEIGY AG he was usually associated with. The argument is, however, that the development alliances he skillfully forged were held together by more than humanitarian motives. In 1960, Geigy initiated the creation of the BASLE FOUNDATION FOR THE AID OF DEVELOPING COUNTRIES, made up of six pharmaceutical companies with its seat in Basel (CIBA, DURAND & HUGUENIN, J. R. GEIGY AG, HOFFMANN-LA ROCHE, LONZA, and SANDOZ), whose deed of foundation revealed the wish to help “*underdeveloped*” countries especially in vital areas of medicine, hygiene and agriculture.¹⁷

14 Geigy, Der Sprung in die Selbständigkeit. Entwicklungshilfe und Menschheitsproblem. Rektoratsrede gehalten an der Jahresfeier der Universität Basel am 23. November 1962, Basel 1962, pp. 1–22, here: p. 4.

15 Entwicklungshilfe in Tanganjika. Ein Vortrag von Prof. Rudolf Geigy, in: Neue Zürcher Zeitung (nzz), 05.12.1963.

16 Geigy, Lehrzentrum Ifakara in Südtansania. Völkerverbindende Entwicklungshilfe, in: Basler Nachrichten, 31.01.1976.

17 Firmenarchiv der NOVARTIS AG, Bestand CIBA, RE 15.04.1, Basler Stiftung zur Förderung von Entwicklungsländern, März 1960-Februar 1963, Akten Prof. Dr. M. Staehelin, Stiftungsurkunde, p. 2.

The Basle Foundation for the Aid of Developing Countries and the Rural Aid Center (RAC) in Ifakara

In striking contrast to Rudolf Geigy, Arthur Wilhelm, vice-president of CIBA and president of the SCHWEIZERISCHE GESELLSCHAFT FÜR CHEMISCHE INDUSTRIE never concealed the economic and political interests behind the companies' possible engagement in Tanganyika. Wilhelm was very aware of the changing atmosphere in Switzerland and the political and social pressure exerted on the private industry. Indeed, several Swiss companies already highlighted their engagement in the development sector. As early as 1949, GEBRÜDER VOLKART in Winterthur embarked on a project of "technical aid" placed under the tutelage of the then founded VOLKART FOUNDATION. The year 1959 witnessed the establishment of the SCHWEIZERISCHE STIFTUNG FÜR TECHNISCHE ENTWICKLUNGSHILFE, not to mention the existing experiences of CIBA and SANDOZ as collective members of the SCHWEIZERISCHES HILFSWERK FÜR AUSSEREUROPÄISCHE GEBIETE (SHAG).¹⁸ CIBA's vice-president shared the widespread opinion that that it was within the boundaries of the newly independent African countries that the course for one's own economic competitiveness should be set and where to successfully scotch the threat of an emerging communist ideology. In the company's newspaper, he made clear:

*"I don't want to call Switzerland's youth to the 20th century crusade in the underdeveloped countries. But I think that more young people – scientists, technicians and business people – should go to the front line of the struggle to develop Africa, if we are to retain our prestige in the world. Only in this way can we sharpen the weapons that we will so bitterly need in the future battle for the markets of the free world."*¹⁹

Since the battle that Wilhelm so lively evoked in martial terms was not just one over economic transactions but one more sustainably decided in the cultural sphere, the European scientists, technicians and business people were the ideal phalanx which would guarantee Africa's adaptation to Western values. According to Wilhelm, physicians especially were the few foreigners in Africa "who enjoy the unresented respect of the natives" because they help them to "get rid of demons, charmers and sorcerers."²⁰ That the Western effort was whole-hearted was undisputed but the outcome was open-ended. Were Africans capable of adapting to Western culture at all? Was the establishment of capitalist economic structures a wise strategy or wasn't it more likely that callow capitalist structures in Africa were especially prone to communist takeover?²¹ Answers to these pressing questions were best to be found on the spot. In 1960 Rudolf Geigy, Arthur Wilhelm, his wife Ria Wilhelm, as

18 Albert Matzinger, Die Anfänge der schweizerischen Entwicklungshilfe 1948–1961, Bern, Stuttgart 1991, p. 170.

19 Arthur Wilhelm, Von den kulturellen Aufgaben Europas in Afrika, in: Ciba-Blätter, Vol. 170, 1960, pp. 2–11, here: p. 8.

20 (StABS), ED-REG 1c 190–2-8 (1), Ifakara Schulungszentrum 1959-1968, Ansprache Arthur Wilhelm anlässlich der 80. Generalversammlung der Schweizerischen Gesellschaft für Chemische Industrie, 27.10.1960, pp. 1–15, here: p. 7.

21 Firmenarchiv der NOVARTIS AG, Bestand J. R. GEIGY AG, VW 8, Protokoll Nr. 4/61 der Sitzung des Wirtschaftspolitischen Komitees, 16.08.1961, p. 1.

well as Albert Meier, a young CIBA engineer, ventured to Tanganyika in order to fathom out the chemical industry's development aspirations with Edgar Maranta, with high-ranking British officials as well as Tanzania's future president Julius Nyerere.²² The major reason for the journey was Geigy's proposition to the BASLE FOUNDATION to invest in the education of young Tanganyikans, especially in the field of medicine and agriculture. One of the classical development schemes widely applied in the 1960s was to invite students to Switzerland where they – for a short period of time – would acquire certain technical skills which they could apply when back in their home countries. However, the members of the STI found major weaknesses in this form of development aid, not the least prevalent of which was the fear that, after having tested the fruits of Swiss opulence, the young African scholars would remain in Europe or seek careers outside their countries without ever feeling morally obliged to subordinate themselves to the economic and social advancement of their countries of origin.²³ More effective in Geigy's eyes was the concept of "training on the spot" that he wanted to achieve through the creation of a RURAL AID CENTER (RAC) in Ifakara and whose graduates would form the new "middle class" the emerging nation so bitterly needed.²⁴

BUILDING THE TANZANIAN NATION

Switzerland's wish to train paramedical personnel in Ifakara revealed at least three things: Firstly, Tanganyika's continuous dependence on foreign donors and especially on Great Britain in major areas of public life; Secondly, a mismatch between Switzerland's focus on the "middle class" as the moral pillar of the nation and Nyerere's attempt to integrate the rural populace into the overall project of nation-building; and thirdly, the drastic shortcomings in manpower, training and finances that characterized the Tanganyikan health sector in the early 1960s. With regard to foreign relations and the public service, Tanganyika's political independence in 1961 did not necessarily mean a decisive rupture with the past: until 1963, when several Western policy decisions accounted for what historian Cranford Pratt has called "the loss of innocence" in Julius Nyerere's political thinking, Tanganyika's

22 Rolf Wilhelm (in collaboration with Marcel Tanner and Thierry Freyvogel), Das Projekt des "Rural Aid Center" in Ifakara, Tanzania, [Typescript], 06.04.2004, pp. 1–9, here: p. 1.

23 Freyvogel, Entwicklungshilfe in Tanganyika. Separatdruck aus dem Schweizerischen Jahrbuch "Die Ernte", 1963, pp. 55–66, here: p. 64.

24 Geigy, Training on the Spot. Swiss Development Aid in Tanzania 1960–1976, in: Acta Tropica, Vol. 33, No. 4, 1976, pp. 290–306, Geigy, Neue Aufgaben des Tropeninstituts, in: Mitteilungsblatt der Tropenschule des Schweizerischen Tropeninstituts in Basel, No. 9, 1960, pp. 6–9, (BAR), E 2003–03 (-), 1976/44, (Schweizerisches Tropeninstitut Basel), 1960–1963, Rudolf Geigy, Unmittelbare Entwicklungshilfe am Ort in Afrika. Vortrag gehalten am 17. Januar 1963 vor der Deutschen Afrika Gesellschaft und der Deutschen Parlamentarischen Gesellschaft in Bonn, NOVARTIS Firmenarchiv, J. R. GEIGY AG, SP 5, Spenden für Wohlfahrts- und Fürsorgeinstitutionen: Entwicklungshilfe/Entwicklungsländer 1960–1965, Arthur Wilhelm, Hilfe zugunsten von Entwicklungsländern (Exposé), Februar 1960, p. 10, (BAR), E 2200.83 (A), 1983/26, 4, C 9.1, Rural Aid Center Ifakara, 1960–1965, Bericht über die Reise der Herren Dr. Arthur Wilhelm, CIBA, und Prof. Rudolf Geigy, SCHWEIZERISCHES TROPENINSTITUT, zum Studium der in Ostafrika bestehenden Möglichkeiten für Schweizerische Entwicklungshilfe – zu Händen des Basler Initiativ-Komitees, 19.09.1960.



RURAL AID CENTRE, Ifakara, source: SWISS TROPICAL AND PUBLIC HEALTH INSTITUTE (SWISS TPH)

foreign relations were still very much directed towards its former colonial master.²⁵ Tanganyika's dependency-strategy was feasible in the ongoing British financial contributions to its former mandate territory, as well as in the structure of public services where several of the key positions remained in the hands of British experts. One of the prime examples for a dependence strategy in action is the WORLD BANK report of 1961 whose economic-driven recommendations were not just entirely based on the musings of Western experts but whose results were more or less directly translated into the First Development Plan (1961–64).²⁶ While the implementation of an orthodox Western development model with its fondness for improving the untapped potential of African agriculture can be interpreted as colonial legacy, the discourses about rural development were unprecedented. As Michael Jennings has shown, the new African elite's emphasis on raising the socio-economic standards of living, as well as the "*moral betterment*" especially of the rural population, marked a decisive shift from colonialism to the post-colony.²⁷ Instead of following Geigy's

25 Cranford Pratt, *The Critical Phase in Tanzania*.

26 The INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT (ed.), *The Economic Development of Tanganyika*, Baltimore 1961.

27 Michael Jennings, "A Very Real War." Popular Participation in Development in Tanzania During the 1950s and 1960s, in: *The International Journal of African Historical Studies*, Vol. 40, No. 1, 2007, pp. 71–95, here: p. 87, Jennings, *We Must Run While Others Walk. Popular Participation and Development Crisis in Tanzania, 1961–9*, in: *Journal of Modern African Studies*, Vol. 41, No. 2, 2003, pp. 163–187.

preferred model of the “middle class” as the vanguard of a settled nationalism, Nyerere’s political project mainly focused on the underprivileged rural dwellers. Development in post-independence Tanganyika mainly meant rural development and – in contrast to what had been experienced in Europe – was integral to discourses of citizenship and nationhood. Health ranged prominently in the discourse of nation-building. The “new” Tanganyikan citizen was a healthy citizen and able to physically contribute to the creation of the nation. In the context of designing the medical development plan of 1963, minister of health, Derek Bryceson, contended:

“There is too apart from humanitarian reasons, another very good reason for wanting a healthy population. This is because we need every bit of energy we have to put to the task of building the nation. Building a nation is not a job to entrust to chronically sick people.”²⁸

The relationship between nation-building and health was not just that the nation as a “*imagined community*”²⁹ was made up of healthy citizens but equally that the moral requirements for being a citizen afforded one’s own efforts in building up a healthy nation. The post-independence development planners acknowledged the vital importance of the expansion of rural health care through newly built “*dispensaries*” and especially “*health centers*”, but perhaps even more important was that these facilities “*will be built as nation-building projects with a resultant financial saving in capital expenditure*” as one can read in the above-mentioned medical development plan of 1963.³⁰ The discourse of nation-building did however not just serve the project of national unification but was a means to legitimize an austerity program in health care spending because the lion’s share of rural health expenditure had to be covered by the local authorities. Not surprisingly, and despite all assertions to improve the health status of rural dwellers, the expenditure for health care in the immediate post-independence period fell short of all expectations. Compared to sectors such as agriculture and industry, the funds directed to health in the Three Year Plan (1961–1964) and the First

28 (TNA), 450/HE/1172, Medical Development Plan, 1963, Speech by the Hon. D. N. M. Bryceson, M. P., Minister for Health, p. 2.

29 Benedict Anderson, *Imagined Communities. Reflections on the Origin and Spread of Nationalism*, London, New York 1991.

30 (TNA), 450/HE/1172, Medical Development Plan, Second Draft of the Medical Development Plan. A Report of the Medical Development Committee, pp. 1–10, here: p. 5. The importance for covering the rural countryside with a sufficient number of health centers providing both curative and preventive services has already been acknowledged in 1956 and once more re-iterated in the often cited report by sociologist Richard Titmuss, see: Richard M. Titmuss, *The Health Services of Tanganyika. A Report to the Government*, London 1964, pp. 57–58, M.P. Mandara, *Health Services in Tanzania. A Historical Overview*, in: G. M. P. Mwaluko et al. (eds.), *Health and Disease in Tanzania*, London, New York 1991, pp. 1–7, here: p. 5, Wilbert Chagula, Eleuther Tarimo, *Meeting Basic Health Needs in Tanzania*, in: Kenneth W. Newell (ed.), *Health By the People*, Geneva 1975, pp. 145–168, here: p. 149.

Five Year Plan (1964–1969) turned out to be meager.³¹ Government spending on health was to large degrees absorbed by larger hospitals and curative services and thus cemented the often-deplored colonial legacy of rural-urban inequalities in the provision of health care in Tanzania.³² Only the Second Five Year Plan (1969–1974) marked a considerable shift from wishful thinking to a real per-capita increase in health care spending and a channeling of funds to the establishment of medical facilities in the country’s vast rural areas.

One of the areas that clearly evidenced the various problems of the Tanzanian health sector in the early 1960s was the training and provision of health care personnel. With about twelve registered doctors in government service in 1961, the Tanzanian health service after colonialism had literally to be started from scratch.³³ On the eve of independence, there were several different health cadres each of which trained in accordance to their specific functions within the Tanzanian health system. On the lowest echelon was the “*rural medical aid*” in charge of a rural dispensary and who replaced what had been known as the “*tribal dresser*.” The second higher level was occupied by a so-called “*medical assistant*”, presiding over curative and preventive services offered by the health centers. The training of medical assistants constantly gave rise to heated political debate. Rather than augmenting the amount of medical assistants, politicians in the years following independence were more eager to increase the number of African doctors whose professional ethos was constantly threatened by the former. Medical assistant courses came to a halt in 1962 but were re-introduced six years later. Makerere University in Uganda was the sole institution that offered full medical degrees to Tanganyikans, Kenyans and Ugandans. In 1961 the Tanganyikan government planned to supplement Makerere by establishing a MEDICAL SCHOOL in Dar es Salaam, while at the same time closing down the MEDICAL ASSISTANTS SCHOOL at Muhimbili hospital. The MEDICAL SCHOOL was opened in 1963 and provided a medical diploma rather than medical degrees to “*Assistant Medical Officers*.” In 1968 the School was incorporated into the University of East Africa and became the Faculty of Medicine, University College, Dar es Salaam University of East Africa.³⁴

31 John Iliffe, *East African Doctors. A History of the Modern Profession*, Cambridge 1998, p. 130, W. Kilama, A. M. Nhonoli, W. J. Makene, *Health care Delivery in Tanzania*, in: Gabriel Ruhumbika (ed.), *Towards Ujamaa. 20 years of TANU leadership. A Contribution of the University of Dar es Salaam to the 20th Anniversary of TANU*, Kampala 1974, pp. 191–217, here: p. 198.

32 Oscar Gish, *Planning the Health Sector. The Tanzanian Experience*, London 1975, p. 24, Turshen, *The Political Ecology of Disease in Tanzania*, p. 194.

33 Iliffe, *East African Doctors*, p. 119.

34 Kilama, Nhonoli, Makene, *Health care Delivery in Tanzania*, p. 206.

STI's RAC has been heralded as the "*showcase of development*" not only because it shifted its focus to the peripheral rural regions where the many developmental problems were said to be encountered, but more so because it deployed a specific governance structure including existing health and research institutions in Ifakara.³⁵ At record speed, the architect Ernst Heusser from an Anglo-Swiss sisal estate (AMBONI ESTATE LTD., Tanga) designed and built the new compound that was inaugurated on July 22nd, 1961. The work could not have been executed without the support offered by the Swiss Capuchin mission. The idea of a RAC was kindly received by Tanganyikan government circles but met fierce resistance by the local population. When work started on the ground bordering the mission land, Ifakara's local inhabitants constructed a wooden shack overnight in order to claim the land. It was the Mission that mitigated the conflict in allotting the BASLE FOUNDATION missionary-owned land on which the RAC could finally be constructed.³⁶

Between July and October 1961, members of the STI trained forty "*Rural Medical Aids*" who had been selected by the MINISTRY OF HEALTH. Until 1964, the training also included several up-grading courses for "*medical assistants*" to become "*assistant medical officers*", as well as courses for health assistants who were trained on demand by the Tanzanian government and somehow against the wishes of the BASLE FOUNDATION.³⁷ STI members were not only proud to show the African hinterland to the urban dwellers arriving from Dar and to introduce them to the notorious medical problems in the Tanganyikan countryside, but to offer courses during which the students worked in the clinic, in the lab and on several expeditions to the Tanzanian "*bush*."³⁸ Even though the curriculum was geared towards biology, topics such as clinical medicine, pathology, rural health and hygiene, and epidemiology also ranged among the key subjects. Special attention was given to practical courses in laboratory techniques and the chemical control of ecto-parasites. As it seems, not only health and rural hygiene were major areas of intervention. Moreover it was the modernization of the agricultural sector that accounted for a consensus between the industrial sector, the Swiss development agency and Tanzanian nation-builders.

35 Jürg Bürgi, Al Imfeld, Mehr geben, weniger nehmen. Geschichte der Schweizer Entwicklungspolitik und der NOVARTIS Stiftung für Nachhaltige Entwicklung, Zürich 2004.

36 (StABS), ED-REG 1c 190-2-8 (1), Ansprache Wilhelm, p. 8.

37 (ASTI), Courses 1966-1971, Die Basler Stiftung zur Förderung von Entwicklungsländern, pp. 1-2, here: p. 1.

38 Freyvogel, The Work at the RURAL AID CENTER (RAC) Ifakara, Tanganyika, in: Acta Tropica, Vol. 21, No. 1, 1964, pp. 91-95, here: p. 94.

DEVELOPMENT'S UTOPIAS: THE LUMEMO PROJECT

From the outset, strengthening the health sector through an “*army against misery, disease and death*” was never considered the sole and most efficient intervention for Tanzania’s socio-economic progress.³⁹ In the early 1960s health lagged far behind investments in agriculture and industry which were considered the genuine development areas also by the members of the DFTZ in Bern. The Swiss propositions, which were negotiated with the permanent secretary of the MINISTRY OF AGRICULTURE AND COOPERATIVE DEVELOPMENT and groundnut scheme veteran Archibald (Archie) Forbes during Geigy’s and Wilhelm’s visit in 1960, reveal the primacy of agriculture and the BASLE FOUNDATION’s desire to open up new markets for its chemical products. The situation for such an endeavor seemed especially favorable given that IMPERIAL CHEMICAL INDUSTRIES (ICI) was losing ground in the East African pharmaceutical market.⁴⁰

The co-operative movement in Tanganyika earnestly initiated from the mid 1950s became the cornerstone for a vitalization and capitalization of the rural countryside and it was these co-operatives, as social and economic units, that were considered by the members of the BASLE FOUNDATION as beneficial to the import and digestion of Western science and technology.⁴¹ Apart from the training of medical personnel, Forbes asked to complement the training for rural medical aids with special courses for the members of the MINISTRY OF AGRICULTURE. In particular, courses in laboratory techniques or training field assistants in handling the application of insecticides found his strong support. He also proposed creating a mobile unit that was to tour the Northern part of the country in order to train coffee farmers in various spraying techniques.⁴² Expanding the work of the RAC from medicine into the field of agriculture was highly regarded by the members of the DFTZ. In 1961 the agency was puzzled by the fact that medical missions in the Third World were nothing young Swiss doctors found inspiring and a first attempt to send out health professionals to Tanganyika had to be abandoned due to the modest numbers of registered volunteers.⁴³

39 Geigy, Rural Medical Training at Ifakara. Swiss Help to Tanzania, in: *The Lancet*, Vol. 285, No. 7400, 1965, pp. 1385–1387, here: p. 1385.

40 NOVARTIS Firmenarchiv, J. R. GEIGY AG, SP 5, Notiz zur Besprechung vom 8. Mai 1961 betreffend Entwicklungshilfe/Tanganjika, pp. 1–2.

41 For a description of the rise of the co-operative movement already starting in the mid-1950s, see: Andrew Coulson, *Tanzania. A Political Economy*, Oxford 1982, pp. 60–69, Geigy himself initiated the creation of a co-operative in Ifakara including the establishment of a rice-mill totaling an amount of CHF 200'000 to be dispersed by the Basle Foundation, see: NOVARTIS Firmenarchiv CIBA, RE 15.04.11, Basler Stiftung zur Förderung von Entwicklungsländern, Protokolle der Stiftungsratssitzungen 1960–1982, Hilfe an Entwicklungsländer, Besprechung vom 27. April 1960, 10 Uhr, bei der CIBA Aktiengesellschaft, pp. 1–8, here: p. 6.

42 Ibid., Archibald Forbes, Training for Laboratory Work and Spraying, 25.03.1961, pp. 1–3.

43 (BAR), E 2200.83 (A), 1983/26, 3, B. 8.15.1, Experten, Spezialisten, Schweizerärzte, 1962–1963, Erich A. Messmer, Arbeitsmöglichkeiten für Schweizer Ärzte in Tanganyika, 01.05.1962, p. 1.

Switzerland naturally felt more at home with agriculture. In 1961, members of the DFTZ and the pharmaceutical companies met in Bern in order to discuss the Swiss government's possible contribution to the training of the agricultural field assistants.⁴⁴ During the meeting the BASLE FOUNDATION drove home the argument that they already invested considerably in the building up of the RAC and it was now the DFTZ's turn to cover the costs for the training of agricultural assistants.⁴⁵ An important role in these negotiations and the DFTZ's final decision to support the scheme was government representative Friedrich Traugott Wahlen, who replaced Max Petitpierre as head of the DEPARTMENT OF FOREIGN AFFAIRS in 1961.

Wahlen literally embodied Swiss agricultural policies during WORLD WAR II. The "*Plan Wahlen*" attempted to systematically increase agricultural production and to guarantee Switzerland's self sufficiency amidst an adversely-perceived and war-ridden European environment. Before his election to the Swiss government, Wahlen was Director of FAO's AGRICULTURAL DIVISION and later its Deputy Director-General with headquarters in Washington and Rome. Southern Tanzania was not unknown to Wahlen. Only four years after A. T. Culwicks' "*Ulanga Rural Development Scheme*" vanished into air in 1951, the region once again came into the focus of the colonial development planners. This time, however, with international assistance and imbued with a spirit of what James Scott has called "*high modernism*."⁴⁶ Thus, the somewhat particular discussions of the academic curriculum at the new RAC have to be seen in the context of a larger and international dimension of foreign aid and the socio-economic changes in Ulanga district.

In 1955, the Tanganyikan government officially requested FAO experts to conduct a preliminary agricultural survey for the Rufiji basin that was submitted in 1961.⁴⁷ About 180 kilometers inland from the Indian Ocean, Kilombero and Luwego rivers meet Great Ruaha in order to form the Rufiji, Tanzania's largest river. Beginning at Stiegler's Gorge – a mountain range named after a German hunter who lost his life in the gorge in 1907 – the Rufiji meanders through a floodplain (the Lower Rufiji Valley) providing a fertile ground

44 (BAR), E 2003-03 (-), 1976/44, 46, t. 912.032, Basler Stiftung zur Förderung von Entwicklungsländern Basel, 1961-1964, Erich Messmer, Aktennotiz über den Besuch der Herren Dr. Wilhelm, Vizepräsident und Delegierter des Verwaltungsrates der CIBA und Dr. O. Niederhauser, stellvertretender Direktor der CIBA am 28. Sept. 1961, 02.10.1961.

45 (BAR), E 2003-03 (-), 1976/44, 46, Aktennotiz über den Besuch der Herren Dr. Wilhelm, Vizepräsident und Delegierter des Verwaltungsrates der CIBA und Dr. O. Niederhauser, stellvertretender Direktor der CIBA am 28. Sept. 1961, 02.10.1961, pp. 1-3, here: p. 2.

46 James Scott, *Seeing Like a State. How Certain Schemes to Improve the Human Condition have Failed*, New Haven 1998.

47 The Rufiji Basin Tanganyika. FAO Report to the Government of Tanganyika on the Preliminary Reconnaissance Survey of the Rufiji Basin, Rome 1961.

for rice, maize and cotton cultivation. The FAO team, among whom was Swiss engineer Max Freimann, recommended large-scale irrigation and flood control measures and the construction of a large dam at Stiegler's Gorge.⁴⁸ As historian Heather Hoag has shown, these large dam projects were appealing to African leaders after independence because they were the material symbols of state power and progress. Many of them had as their generic model the TENNESSEE VALLEY AUTHORITY (TVA), which provided the grid for river planning development transferrable to different Third World locations.⁴⁹ With all due fondness for the transfer of large-scale technology as well as development planning, the WORLD BANK report's chapters on irrigation and flood control suggested a trial and error approach to Tanganyikan development: research and several "*pilot projects*" were to become the linchpins for eliminating adverse effects of development and for measuring success.⁵⁰

Feeling more and more responsible for what happened in Ulanga district, Rudolf Geigy initiated such a pilot project in order to better gauge the unintended outcomes of such interventions. At the heart of his "*Lumemo project*" was the Ihango area, a dry and so far uncultivated strip of land in close proximity to Ifakara and consisting of about 2500 acres awaiting improvement.⁵¹ Flood regulation would be guaranteed through the construction of a dam that retained the waters of the Lumemo river, a tributary of the Kilombero. With the help of a large channel which entered an even finer web of several small channels, the water would then finally find its way to the emerging cultivation sites under controlled conditions. In September 1962, Max Freimann tested the feasibility of Geigy's propositions, which had strong advocates both in the FAO and the Tanzanian government. Derek Bryceson, especially, by then Minister for Agriculture, saw the creation of a co-operative in charge of the cultivation and marketing of the products ideally fitting into the government's ideological framework of "*self-help*."⁵² After a meeting held with Rudolf Geigy and members of the Swiss government in 1962, Bryceson was glad to inform the Tanganyikan public that Switzerland was positively considering the investment of the requested £350,000 for the "*development of Kilombero district*."⁵³ Shortly after, expert Freimann investigated the area and tested the project on the ground for technical feasibility. Instead of treating the selected area as a unity, he however preferred a division of the land into

48 A. D. Beck, The Kilombero Valley of South-Central Tanganyika, in: East African Geographical Review, Vol. 2, 1964, pp. 37–43, here: p. 39.

49 Heather J. Hoag, Transplanting the TVA? International Contributions to Postwar River Development in Tanzania, in: Comparative Technology Transfer and Society, Vol. 4, No. 3, 2006, pp. 247–268.

50 The Economic Development of Tanganyika, see especially Chapter 6, pp. 129–140.

51 (BAR), E 2003–03 (-), 1976/44, 205, (4), Lumemo-River, Bewässerungsprojekt, 1961–1963, Rudolf Geigy to Hans Keller, 21.05.1962, p. 1.

52 Ibid., Schenk, Besprechung mit Mr. Bryceson am 20. Juli 1962.

53 (BAR), E 2200.83 (A), 1983/26, 3, Agricultural Development (Lumemo), 1962–1963, Press Release. Issued by Tanganyika Information Services. "*Mr. Bryceson Returns from Europe with Promises of Aid*", 11.05.1962, pp. 1–2, here: p. 1.

three parts: under the overall supervision of a co-operative, one part of the land should be allocated to single local (or resettled) farmers; a second part served the establishment of a “trial farm”, led by “Swiss agricultural instructors.” The remaining strip of land was to be taken up by a large and commercially producing farm that should assure the financial sustainability of the overall project.⁵⁴

Before the Tanganyikan government officially requested the DFTZ to implement Freimann’s proposals, the Swiss project planners were confronted with worrying news leaking out of Germany’s development offices. Inspired by the WORLD BANK report and the many other expert missions that favorably evaluated the development potential of the Rufiji basin and especially the Kilombero Valley, the “German Technical Assistance” suggested the establishment of a AGRICULTURAL EXPERIMENTAL AND TRAINING CENTER FOR WATER DEVELOPMENT AND IRRIGATION AND AGRICULTURAL ENGINEERING which came not only geographically close to the Swiss training farm but was also very similar in its intentions. The major difference between the two projects was that the German plans were already more advanced and, with a budget of DM 10 millions, by far exceeded the proposed Swiss contribution.⁵⁵

For Geigy and the members of the DFTZ, it was obvious that with the German ideas taking shape in Ifakara, the Swiss project and the RAC “which was called to offer relief in the agricultural sector” would dwindle away and be reduced to medical courses.⁵⁶ On several occasions, Geigy intervened at the MINISTRY OF AGRICULTURE, trying to convince Bryceson that the Lumemo river did not carry enough water for the running of two farms and that the local population would have difficulties in understanding the presence of two nations working in the very same location. Understandably, Derek Bryceson had major difficulties in rejecting the generous German offer. The German plans seriously unhinged his previously uttered conviction that “Ifakara and the Lumemo project are 100% Swiss and must remain so” or – as assured in a letter to Rudolf Geigy – that he would never allow the Germans “to upset old friends like yourself simply because they have a lot of money to offer us.”⁵⁷ Instead he had no problem in accepting the idea that German and Swiss experts could work together in a joint manner.⁵⁸ In this situation, Geigy saw two ways out of the impasse: Firstly, he proposed to push ahead and to “practically” start with the project: “We could start with some

54 Ibid., Max Freimann, Tanganyika. Lumemo-Bewässerungs-Projekt. Provisorischer Vorbericht, 31.10.1962, pp. 9–11.

55 Ibid., German Technical Assistance for the Agriculture of Tanganyika. Report and Expert Opinion by the Delegation, pp. 1–30.

56 Ibid., Rudolf Geigy, Lumemo Rivier Irrigation Project, 09.07.1963, p. 2.

57 Ibid., pp. 2–3.

58 Ibid., Derek Bryceson to August Lindt, 04.10.1963.

families and try to grow cotton as a cash crop and rice, maize and soya as food crops” he proposed.⁵⁹ Parallel to this precipitous start, he wanted to convince August Lindt to pull the political strings in Bonn in order to better coordinate the two projects. The latter however did not share the zoologist’s opinion that all that the German’s project proposal revealed was the lack of local knowledge which guided the process of its formulation. As he skimmed through the pages, the Swiss ambassador was sure that the plans of the German technical assistance were more advanced than the still fuzzy ideas penned by the members of the STI. As he contended:

“Because we are unable to confront the project of our neighboring country with something qualitatively equal or even better, we think that we cannot take responsibility for an intervention in Bonn as regrettable as that might be for the development of Swiss actions in Ifakara. More generally we have to accept the fact that we have less leverage than other countries in the case of competition in the development sector.”⁶⁰

The agricultural experts in Germany observed Geigy’s reservations with increasing astonishment. They always believed that the STI’s activities were restricted to the testing of drugs, insecticides and fertilizers, as well as the training of local personnel. Only the experiments with fertilizers would probably overlap with their own projected plans.⁶¹ They nevertheless opted for a re-evaluation of the local constituencies and especially to see whether there was some truth in Geigy’s belief, defended with such vehemence, that the Lumemo river did not carry enough water for the two planned development projects. During their re-evaluation of the site, the German experts could not find any signs that would indeed have supported Geigy’s claims but instead they found some evidence that the development aspirations would probably lead to a salinization of the whole area. These new insights, together with Germany’s conciliatory position that the Swiss could work under Germany’s leadership in Ifakara, were enough to thwart the Swiss initiatives in the Tanganyikan agricultural sector.⁶² The abandonment of the Lumemo project was a harbinger of what happened later with the larger dam project at Stiegler’s Gorge, when in the 1970s the project disappeared in the cross-fire of criticism from a politicized “*third-world movement*.” For the STI the failure of the Lumemo project and the lessons learned about competition in international aid, led them to shift back from agriculture to medical infrastructures.

59 (BAR), E 2003–03 (-), 1976/44, 205, t.941.1 (4), Rolf Wilhelm, Aktennotiz über die Besprechung mit Herrn Prof. Geigy vom 31. Oktober 1963: Lumemo-Projekt, 04.11.1963, pp. 1–2, here: p. 1.

60 Ibid., August Lindt, 27.07.1963.

61 Ibid., Hartmann, Schweizerisch-deutsche Koordination auf dem Gebiet der landwirtschaftlichen Entwicklungshilfe, 08.08.1963.

62 (BAR), E 2005 (A), 1978/137, 155, t. 311.01, Lumemo-Bewässerungsprojekt, 1964–66, August Lindt to Rudolf Geigy, 16.04.1964.

DEVELOPMENT'S PATHOLOGIES:

THE CONSTRUCTION OF A PATHOLOGY BLOCK IN DAR ES SALAAM

While the obstacles of international cooperation left Switzerland's agricultural initiatives for Kilombero district in tatters, Geigy and the STI turned to the RAC that has already yielded some success in the training of health cadres. The STI never thought of the RAC as being an isolated outpost far away from the latest currents in medical research and training in Dar es Salaam but conceptualized the center as being firmly anchored within the curriculum of Dar's MEDICAL SCHOOL. Geigy's networking skills considerably facilitated this task. He was member of the schools' board of examiners and the British advisors to the Tanganyikan government did not hesitate to involve him in discussions about how best to adjust the medical curriculum to the country's needs. Especially the MEDICAL SCHOOL's new principal, Dr. Rankin, was attracted by the training offered at the RAC, with its focus on the study of parasites and the complex ways of disease transmission in a natural setting.⁶³

In 1964, negotiations between the STI and the MEDICAL SCHOOL ended with the agreement that the RAC had a firm place in the curriculum of the MEDICAL SCHOOL. Originally the RAC was designed to introduce third-year students to the secrets of rural health and hygiene as well as the many tropical diseases, but since there was a lack of training in basic health subjects in Dar es Salaam, the RAC already hosted second-year students, imparting to them its knowledge on tropical pathology.⁶⁴

The progress made by the BASLE FOUNDATION and the STI in the medical sector again opened up a window of opportunity for the Swiss DFTZ, whose members still had difficulties in explaining Switzerland's retreat from the Lumemo project. Yet, the political climate was very much in favor of a more thorough Swiss involvement. At least this was the opinion of Peter Wiesmann and Mario Grassi, two DFTZ-members who in September 1965 toured the country in order to propose to their employer new suitable areas of intervention and to pave the way for the very first legal agreement on technical and scientific cooperation between the two countries that was finally signed in October 1966.⁶⁵ Their report on behalf of the DFTZ made unmistakably clear that the association of Tanganyika and Zanzibar in 1964 to create the Tanzanian republic gave rise to a political constellation which was less

63 (BAR), E 2200.83 (A), 1983/26, 771.1, Rudolf Geigy to R. Schenkel, 23.09.1963.

64 (ATAF), Lettres d'Ifakara (1959–1985), Thierry Freyvogel, 09.08.1964, pp. 1–4, here: pp. 1–2.

65 (BAR), E 2005 (A), 1978/137, 155, t. 311-Tanzania – Projekte und Aktionen 1964–1966, Abkommen über die technische und wissenschaftliche Zusammenarbeit zwischen der Schweizerischen Eidgenossenschaft und der Regierung der Vereinigten Republik Tansania, 21.10.1966.

pro-West than in the years before but as long as Nyerere was in power – they mused – a “*swing to the left*” was not very likely.⁶⁶ During their visit, Wiesmann and Grassi met Rudolf Geigy in Ifakara who – considering the country’s deficiencies in medical training – made them include the establishment of a pathology block in Dar es Salaam in their list of projects worth supporting.

From a Western perspective, pathology and a sound clinical diagnosis of several communicable and chronic diseases within a central and urban laboratory was an ideal starting point for Tanzania to come to terms with its undeveloped health sector. There was no battle to be won against deadly diseases without proper means of diagnosis and clinical analysis. With the creation of the MEDICAL SCHOOL in 1963 and later the Faculty of Medicine, Tanganyika had already proved its wish to get rid of the legacies of colonial research. But was there a more lively symbol of colonial science than the old laboratory at Ocean Road which was inseparably connected to the name of German microbe-hunter Robert Koch? Geigy’s pathology block was the realization of various Western development ideals such as “*knowledge-transfer*,” “*partnership*” and “*self-help*” because it not only included Tanganyikan staff from the very beginning but it was designed in such a way that it could be handed over to Africans as soon as they were considered capable of carrying out the task.⁶⁷ The pathology block the STI had in mind was designed after a British model and was to comprise all the different scientific branches usually covered by big university hospitals: Pathological anatomy and histology, microbiology, serology and parasitology, as well as clinical chemistry, hematology and a center for blood transfusion.⁶⁸ Retrospectively, it is not false to say that at the core of Geigy’s focus on pathology and urban health care lurked the rural countryside and the idea that the RAC should be more deeply anchored within a Tanzanian health system. Rural training and research – Geigy was sure – were fundamentally linked together.

For the members of the Swiss technical agency, things did not present themselves so clearly. Far from sharing Geigy’s enthusiasm for medical infrastructure, in a meeting they

66 Ibid., Peter A. Wiesmann, Rapport über die Abklärungsmission in Tanzania 5.–29. September 1965, 10.11.1965, pp. 1–37, here: p. 2.

67 (ASTI), Pathologie-Block, Dar es Salaam, Rudolf Geigy, Eingabe der Basler Stiftung zur Förderung von Entwicklungsländern an den Delegierten für technische Zusammenarbeit in Bern, enthaltend einen Vorschlag zur gemeinsamen Finanzierung eines “*Pathologie-Blockes*”, der für die Medizinschule von Tansania auf deren Areal in Dar es Salaam errichtet werden soll, Dezember 1967, pp. 1–12.

68 Ibid., Frédéric Roulet, Bemerkungen zum Vorschlag: Errichtung eines “*Central Pathology Laboratory*” an der MEDICAL SCHOOL, Dar-es-Salaam, Tansania, 09.11.1965, pp. 1–3.

refused to accept the costs for the construction, with the argument that such an undertaking neither complied with their own development concepts nor was it evident that a laboratory block designed after a British model would still embody a grain of “Swissness.”⁶⁹ It was only due to the friendship between Lindt and Geigy, as one DFTZ member somewhat dryly remarked, that Geigy could proceed with the already initiated plans. The Swiss government’s reluctance once again revealed Geigy’s ability to forge strong alliances and to mobilize different advocates who championed his cause: one month before the official request was sent out to the Swiss government in 1967, pathologist and Geigy’s companion during the first expedition to Africa in 1945, Frédéric Roulet, as well as the physician Otto Gsell, underlined the saliency of such a pathology block especially for the Swiss pharmaceutical industry⁷⁰ and the Swiss ambassador in Dar es Salaam, Marcel Luy, who after careful investigations with representatives of WHO and the UN did not wholeheartedly embrace this idea, could affirm Geigy towards the end of the year of his “*opinion très positive à l’égard de ce projet dont la réalisation est vivement désirée par le gouvernement tanzanien.*”⁷¹ The agreement reached in 1967 bore the stamp of a compromise: The project, mounted as a private initiative led by the BASLE FOUNDATION, obliged the pharmaceutical industry to invest CHF 900,000; the Swiss government contributed to the construction of the building with an amount of CHF 1.2 million – 50% of the costs of all the Swiss development projects in Tanzania in 1969 – while something more than CHF 1 million had to be provided by the Tanzanian government.⁷² The agreement between the BASLE FOUNDATION and the Tanzanian government in turn stated the following: the BASLE FOUNDATION would provide the head of the pathology block over a period of ten years while the RAC should function as an integral part of the pathology block as an outpost for training and research “*although it remains under the auspices of the Basle Foundation.*”⁷³ Far from being a linguistic subtlety, the latter formulation was especially important to the Swiss party in order to avoid the RAC being handed over to the Tanzanians after this ten-year period.

69 (BAR), E 2005 (A), 1980/82, 243, t. 311-Tanzania – Medical School Dar es Salaam, 1967, Sigismund Marcuard, Notice pour le dossier. Entretien du 28.06.1967 chez le Chef du département avec M. le Prof. Geigy concernant la construction d’un bloc pathologique à Dar es Salaam, 29.06.1967, pp. 1–2, here: p. 1.

70 NOVARTIS Firmenarchiv, CIBA, RE 15.04.1, Basler Stiftung zur Förderung von Entwicklungsländern 1960–1975, Otto Gsell, Frédéric Roulet, Bedeutung eines “Central Pathology Laboratory” (Pathology Block) an der Medical School von Dar-es-Salaam (Tanzania), 16.11.1967.

71 (BAR), E 2005 (A), 1980/82, 243, Marcel Luy to Rudolf Geigy, 04.12.1967.

72 (BAR), E 2200.83 (B), 1990/26, 10, 771.22.8, Pathologisches Institut Dar es Salaam, R. Dannecker, Projekt Pathologisches Institut Dar-es-Salaam, Zusammenarbeit mit Schweiz. Fachinstituten, 30.07.1971, pp. 1–5, here: p. 1.

73 NOVARTIS Firmenarchiv, CIBA, RE 15.04.11, Protokolle der Stiftungsratssitzungen 1960–1982, E. Stocker, Protokoll der Sitzung des Stiftungsrates vom 23. Oktober 1968, 10.00 Uhr, bei der CIBA Aktiengesellschaft, p. 8, (BAR), E 2200.83 (B), 1990/26, 10, Agreement between the MINISTRY OF HEALTH AND HOUSING, GOVERNMENT OF THE UNITED REPUBLIC OF TANZANIA (hereinafter referred to as the “Government”) of the ONE PART and the BASLE FOUNDATION FOR AID TO DEVELOPING COUNTRIES (hereinafter referred to as the “Foundation”) of the OTHER PART, 23.01.1969.

However, long before the envisaged “Africanization” of the pathology block was initiated, the development plans revealed major weaknesses, as a consequence of which the responsibility over the whole project was taken from the BASLE FOUNDATION and placed into the hands of the DFTZ. The problems encountered were financial in nature. In their initial plans, the project planners were more concerned with architecture than with questions of the inner life of the pathology lab. In other words, they always assumed that the scientific equipment from the older lab at Ocean Road could be shifted one-by-one to the new building at Muhimbili hospital. On closer inspection this assumption turned out to be wishful thinking. The medical equipment at Ocean Road was too outdated and in such a deplorable state of decay that it would have been impossible to transfer it into a modern environment. For the DFTZ, which more or less clumsily stumbled into this affair, the new situation was the result of an uncoordinated and incomplete planning. As one of the DFTZ developers commented:

“The creation of the pathological laboratory is a prime example of a deficient, partly non-existent planning. Thus the construction was started without settling beforehand the financial arrangement for the laboratory devices with the Tanzanian partners. A continuing use of the older laboratory devices is – apart from few exceptions – out of question because a visit to the former lab revealed that the material is more than 30 to 40 years old. This fact should have been clear to all of us from the outset.”⁷⁴

The new situation afforded additional costs of about CHF 2.5 million for which new donors had to be found. The DFTZ, who feared a further development debacle in Tanzania, proposed three alternative solutions: Firstly, the BASLE FOUNDATION should be asked to hand in a realistic plan for the project until it would be handed over to Tanzanians; Secondly, the Swiss government would look for a university institute which would continue with the project on behalf of the DFTZ (Regieprojekt) or thirdly, the DFTZ would withdraw from the project altogether because, from a legal point of view, it was still the BASLE FOUNDATION which was accountable for the whole endeavor.⁷⁵ In the end, however, it was not the DFTZ but the BASLE FOUNDATION who stepped back from the project because of a mismatch between the high financial burden and the low interest this pathology block encountered among the pharmaceutical companies. The DFTZ decided to continue the project as a government project and engaged Jacques Rüttner, director of the pathological institution of

74 (BAR), E2005 (A), 1983/18, 364, t.311.21, Flying Doctor Service in Tanzania 1967–1972, R. Dannecker, Rapport über die Mission nach Tansania – Kenia vom 08.03.1970–29.3.1970, 03.04.1970, pp.1–36, here: p. 4.

75 Ibid., p. 6.

the University of Zurich, to execute the project on behalf of the DFTZ.⁷⁶ With the government of Western Germany, a new donor for the scientific equipment could finally be found.⁷⁷ In 1971, the Central Pathology Laboratory was inaugurated and two years later, the Tanzanian J. K. Shaba became the first African head of the lab.

DÉVELOPPEMENT MANQUÉ: THE CASE OF CÔTE D'IVOIRE

Côte d'Ivoire has taken a different path into the development decade and within the CSRS. As we have seen, the immediate aftermath of independence in Tanganyika was molded by continuities and close relations to the country's former colonial master until 1964. But while Nyerere forged new alliances from the middle of the 1960s, France continued to remain the point of reference for Ivorian president Félix Houphouët-Boigny. French institutions in Côte d'Ivoire remained almost unaffected by independence. ORSTOM – again – is a case in point. Now positioned as a development agency, the organization more than ever became a strong advocate for the re-invigorated civilizing mission and became entangled by the “*tentacles of progress*.” (Daniel Headrick). Despite the calm waters on which ORSTOM sailed into the development decade, three changes accompanied the passage: Firstly, in a reform carried out in 1960, seven so-called technical committees were created that led to a stronger centralization of the institution and underscored the mono-disciplinary character of scientific research in the postcolony. Secondly, the 1960s witnessed a stronger internationalization of research programs and joint ventures with institutions such as FAO, UNESCO and the UNITED NATIONS. And thirdly, several of the ORSTOM researchers acted as development planners for the respective ministries of the newly-independent country.⁷⁸

ORSTOM adapting to the new political constituencies of the postcolony had far reaching consequences for the fate of the CSRS too. The French organization did not just blur the boundaries between science and the independent African state, but it more systematically than before dragged Swiss scientists into its research programs. In 1962, ORSTOM abandoned its former policy and allowed the commission for the CSRS to send the geologist Ruedi Eckert to Adiopodoumé. Instead of acting independently, Eckert's geological investigations were part of a larger ORSTOM program that was conducted under the leadership of the French geologist Philippe Mangin and aimed at measuring the impact of the climate on soil erosion and the sedimentation of the Bandama river.⁷⁹ Ecology as a new research

76 (BAR), E 2200.83 (B), 1990/26, 10, R. Dannecker, Projekt Pathologisches Institut Dar-es-Salaam, 30.07.1971, p. 2.

77 Ibid., R. Dannecker, Aktennotiz. Besuch einer deutschen Delegation für die Diskussion einer deutsch-schweizerischen Zusammenarbeit im Projekt Pathologisches Laboratorium Dar-es-Salaam, 23.11.1970, pp. 1–4.

78 Sabrié, Histoire des principes de programmation scientifique, pp. 227–229.

79 (ANF), ARCHIVES DE L'ORSTOM, 19900236, Art. 57, Philippe Mangin, Étude du couple érosion-sédimentation en Côte d'Ivoire (Opération Mangin). Le point scientifique en novembre 1966, p. 1.

paradigm also enhanced French influence over the CSRS's research agenda. From early on, and due to its varied ecological situation, Côte d'Ivoire had been perceived as an "ecological laboratory."⁸⁰ In 1962, the ÉCOLE NORMALE SUPÉRIEURE in Paris founded the Lamto research station, 150km north of Abidjan and named after the French scientists Maxime Lamotte and Jean-Luc Tournier. In the attempt to "quantify everything", Lamto not only became a hub for huge collections of specimens. The concept of the ecosystem as being divided up into different and mutually connected spheres structured the work on the ground and rendered Lamto a popular research site for scientists coming from different scientific backgrounds such as zoologists, botanists, pedologists, meteorologists and geographers.⁸¹ Swiss researchers in Adiopodoumé neither resisted the new spirit in biological research nor the quest for inter-disciplinarity. The work of the Swiss scientists Pierre Hunkeler, Peter Vogel and Rodolphe Spichiger was guided by ecological problems and influenced by the charisma of personalities such as the French ecologists Maxime Lamotte and François Bourlière.⁸² The ecological turn in Adiopodoumé led to a different approach towards nature. Broadly speaking, nature was no longer conceived as an infinite source of different specimens as it was a decade ago but as a fragile system that deserves conservation and protection from human influence. One consequence of ecology as a joint research endeavor unifying ORSTOM and the CSRS was that Swiss researchers became part of interdisciplinary programs that sailed under the ORSTOM flag. One of the promoters of a closer attachment of Swiss scientists to French research units was Jacques Miège who was introduced in the first chapter as one of the vanguards of French science in Adiopodoumé. In 1964, Miège became director of the botanical gardens and professor for botany at the University of Geneva from where he maintained close ties to ORSTOM in Adiopodoumé.⁸³ In his function of an honorary member of the SNG and member of the commission for the CSRS, Miège constantly alimented the

80 Lachenal, L'invention africaine de l'écologie française. Histoire de la station de Lamto (Côte d'Ivoire), 1942–1976, in: La Revue pour l'histoire du CNRS, Vol. 13, 2005, pp. 1–15.

81 Ibid., p. 6.

82 Interview with Pierre Hunkeler and Peter Vogel, 17.05.2010/11.08.2010. Claudine Hunkeler, the wife of Pierre Hunkeler published several papers together with François Bourlière in the field of primatology, see: C. Hunkeler, F. Bourlière, M. Bertrand, Le comportement social de la mone de Lowe (*Cercopithecus campbelli lowei*), in: *Folia primat*, Vol. 17, 1972, pp. 218–236, Bourlière, Bertrand, Hunkeler, L'écologie de la Mone de Lowe (*Cercopithecus campbelli lowei*) en Côte d'Ivoire, in: *Terre Vie*, Vol. 23, 1969, pp. 135–163, and Bourlière, Bertrand, Hunkeler, Ecology and Behaviour of Lowe's guenon (*Cercopithecus campbelli lowei*) in the Ivory Coast, in: J. R. Napier and P.H. Napier (eds.), *Old World Monkeys. Evolution, Systematics, and Behavior*, New York, London 1970, pp. 297–350.

83 Rodolphe Spichiger, "Jacques Miège" (1914–1993), in: *Candollea*, Vol. 49, No. 1, 1994, pp. 1–22, here: p. 3.

CSRS with young botanical scholars.⁸⁴ Featuring ecology was of course supported by Jean-Georges Baer who since 1958 acted as president of the INTERNATIONAL UNION FOR THE CONSERVATION OF NATURE (IUCN) with its headquarters in Morges in Western Switzerland.⁸⁵

The dissolution of the boundaries between ORSTOM and the CSRS during the 1960s had major consequences for the different degrees to which Swiss policy makers at home perceived the two research sites in Côte d'Ivoire and Tanganyika as bulwarks of Swiss development aid in Africa. Honorary consul Wimmer complained about the fact that the CSRS was not fully acknowledged as a Swiss development bastion in West Africa and he accused Rudolf Geigy of having far too exclusively promoted Tanganyika in the development race between the two African countries.⁸⁶ The reproaches leveled at Rudolf Geigy were, however, only partially justified. Côte d'Ivoire never escaped Geigy's interest and indeed, Arthur Wilhelm's first development plans included the training of young Ivorian students in the field of medicine, biology and veterinary medicine at the STI.⁸⁷ The fact that Swiss development projects were more easily mounted in East Africa than in Côte d'Ivoire had more to do with the Swiss perception of French influence over Ivorian politics and with ORSTOM's factual tutelage of the CSRS which rendered the site unattractive for public-private partnerships.

DEVELOPMENT – A FRENCH AFFAIR

Côte d'Ivoire too was among those African countries which emerged on the radar of Swiss politics on the eve of independence. Good relations with the former French colony seemed far from being a complicated issue because Houphouët enjoyed a "*renommée*" in Switzerland attributed only to a few of his African peers: a reliable political partner, solid as a rock against communist waves breaking at the borders of the newly independent African nations and very fond of Switzerland where he owned a residence near Geneva. In 1961 Switzerland removed Wimmer as the official Swiss representative in Abidjan and opened

84 Archive Jardin Botanique de Genève (AJBG), Jacques Miège to Jean-Georges Baer, 09.11.1965, p. 1, In the late 1960s and early 1970s his students Marianne Dugerdil and Rodolphe Spichiger – the latter succeeding Miège as director of the botanical gardens in Geneva in 1987 – started to work in a multidisciplinary project led by the French geographer Jean Michel Avenard that focused on the contact zones between ecologically different milieus such as forests and savannahs, see: (ANF), ARCHIVES DE L'ORSTOM, 19900236, Art. 58, Jean Michel Avenard, Le thème "*contact forêt-savane*" en Côte d'Ivoire. Motivation, bilan et perspectives, April 1974, pp. 1–46, here: pp. 19–20.

85 Martin Holdgate, *The Green Web. A Union for World Conservation*, London 1999, p. 69.

86 (FAA), Correspondance Côte d'Ivoire 1959–1962, André Aeschlimann to C. Lambert (CIBA), 04.10.1960, pp. 1–2, here: p. 1.

87 NOVARTIS Firmenarchiv, J. R. GEIGY AG, SP 5, Wilhelm, Hilfe zugunsten von Entwicklungsländern, p. 10.

up an embassy that was headed by Jean Stroehlin, whose sphere of influence comprised the four countries of the “*Conseil d’Entente*” (Côte d’Ivoire, Haute Volta, Niger, Dahomey). However, the new embassy owed its existence to a domino effect and a deliberate avoidance of diplomatic resentment. Commenting about the opening of the new Swiss embassy in Conakry (Guinea), Pierre Micheli, the Swiss ambassador to Paris, asked rhetorically:

*“Is it advisable – considered the circumstances – to leave our post in Abidjan in the rank of a vice-consulate? The rivalry between Mr. Houphouët-Boigny (Côte d’Ivoire) and Mr. Sékou Touré (Guinea) is notorious. The promotion of our embassy in Conakry might be received very badly in Abidjan if things remain here as they are now.”*⁸⁸

In 1962 the two countries signed a trade agreement covering issues such as investment protection, commerce and technical aid that replaced the agreement of 1955. Trading volumes between the two countries however remained modest, the major reason for which being Switzerland’s abstinence from the EUROPEAN ECONOMIC COMMUNITY (EEC) and its operations outside France’s sphere of influence. Trading statistics reveal a blatant picture. Considering Ivorian imports between 1959 and 1961, Switzerland with an amount of 77 million CFA (out of a total of 30.24 billion) appeared in sixteenth position, while sharing the modest eighteenth rank with Norway as far as Ivorian exports were concerned.⁸⁹

Written on the same chart, technical assistance – by then called “*technical cooperation*” out of courtesy – never had the chance to really take off. It is not that there was a shortage of suggestions of how to best develop the African country. Especially the advocates of the CSRS did not lack creativity in demonstrating how the laboratory could now be put into the service of Côte d’Ivoire. Motivated by Eugen Wimmer, in 1961 Ivorian minister for education Joachim Bony visited the members of the DFTZ in Bern in order to place an official request for delegating three Swiss teachers to the CSRS who could offer their services to the ÉCOLE NORMALE DE DABOU – a town some 50 miles West of Abidjan.⁹⁰ The project that bore Wimmer’s handwriting afforded the extension of the CSRS for which the Swiss

88 Cited in: Alioune Dieng, *La Suisse et l’Afrique au lendemain des indépendances. Le cas de la Côte d’Ivoire*, Mémoire de Master en Études Internationales (MEI), Histoire et Politique Internationale (HPI), Graduate Institute Geneva, 2010, p. 35.

89 *Ibid.*, p. 61.

90 (BAR), E 2200.5 (-), 1979/93, 8, G. 6.61.7, Professeurs pour l’ÉCOLE NORMALE de Dabou, 1961–1962, Centre Suisse de Recherches Scientifiques en Côte d’Ivoire. Aide Technique Suisse pour l’école normale d’instituteurs de Dabou. Exposé, 15.02.1962, pp. 1–4, here: p. 3.

entrepreneur himself requested a sum of CHF 100'000 at the DFTZ.⁹¹ Bigger in scope and much more sensitive from a political point of view was the idea that was inserted into the development discussions by professor Robert-Henri Régamey from Geneva University. The project he and his collaborators had in mind was to enter the medical sector in a similar way to what happened in Tanganyika and to support the creation of a medical faculty in Abidjan. This proposal was not made up out of thin air. In the course of the remodeling of the political relations between France and Côte d'Ivoire under the auspices of the development dogma, Houphouët-Boigny – himself a trained doctor – asked the French to invest in the creation of a University in Abidjan.

Considering the similar demands uttered by Léopold Senghor in Dakar, Paris did however not enter negotiations with Houphouët that went any further than concessions to a faculty of law, natural sciences and humanities.⁹² Theoretically, this situation of a negatively answered request by France would have facilitated Swiss development intervention because the agreement between France and its ancient colony stated that Côte d'Ivoire could only apply for other nation's technical assistance when France was not capable or willing to step into the breach.⁹³ It was however exactly the French monopoly over the course of Ivorian development that enjoined a cautious approach by the members of the DFTZ. The example of Côte d'Ivoire shows that political considerations could be a decisive factor in granting or refusing development aid. With regard to the investment in a medical faculty in Abidjan, deputy of the department of foreign affairs, Raymond Probst urged his colleagues not to overhastily endorse the CHF 12 million-project, writing that:

“Dr. Keller and myself believe that the project of a medical faculty is not just too pretentious and too ambitious. According to our experiences in West Africa there is hardly any chance to render it a success. Moreover, we are not at all interested in challenging the thin-skinned French in exactly those areas where they help most generously and efficiently.”⁹⁴

91 (SCNAT), Depot Burgerbibliothek Bern, GA SANW 826, Kommissionen CSRS, Gebäude, Bau und Umbau-Projekte, Kosten 1951–1973, Eugen Wimmer to Hans Keller, 05.05.1962, pp. 1–3.

92 (StABS), ED-REG 42a 2–2-6 (10), Rudolf Geigy, 1960–1972, Eugen Wimmer to Jean Stroehlin, 15.04.1962, pp. 1–2, here: p. 2.

93 (BAR), E 2200.5 (-), 1979/93, 8, G. 6.61.5, Faculté de médecine en Côte d'Ivoire, Jean Stroehlin to Hans Keller, 30.11.1962, pp. 1–7, here: p. 3.

94 (BAR), E 2200.5 (-), 1979/94, 6, 652.20, 1966/1968, Centre Suisse de Recherches Scientifiques en Côte d'Ivoire, Raymond Probst to Jean Stroehlin, 22.06.1962, pp. 1–2, here: pp. 1–2.

Roy Preiswerk's considerations about the possibilities of Swiss development work in West Africa were detached from the specific project of the medical faculty and touched upon more basic issues. In a text entitled „*possibilités pour la coopération suisse en Afrique occidentale d'expression française*“ the collaborator of the DFTZ and later director of the INSTITUT UNIVERSITAIRE D'ÉTUDES DU DÉVELOPPEMENT in Geneva remarked that

“To the contrary, all the other countries of ex-French West Africa (Afrique Occidentale Française, AOF) or ex-French Equatorial Africa (Afrique Equatoriale Française, AEF) except Mali and Guinea, can be considered as territories where France is exerting too much influence so that Switzerland could hardly embark on any far-reaching projects.”⁹⁵

The fear of possibly intruding into what was considered a mainly French affair was once again inscribed in statistics. From the 60-million development credit granted by the Swiss parliament in 1961, Côte d'Ivoire received a mere CHF 15'000 for the period 1962–1964. Moreover, substantial government projects were not planned for the years to come.⁹⁶ Neither the CHF 100'000 for mitigating the CSRS's desolate financial situation nor the more substantial grant to a medical faculty in Abidjan found the DFTZ's apt appraisal. Vital proof for political perceptions reverberating strongly in the offices of the DFTZ in Bern is the erratic nature of the organization's development focus and its attempt to try its luck with a medically-oriented project in Guinea – a country that openly broke with France in the referendum of 1958.

A MEDICAL SCHOOL FOR CONAKRY (GUINEA)

The history of Swiss development aid could hardly be understood without a global perspective, without the acknowledgment of a travelling of concepts from one place to another, true to the motto of what failed in one context might work in another. The decision not to invest time and money in a medical faculty in Abidjan was not a decision to abandon the support for medical infrastructure altogether but – according to Preiswerk's suggestion – to look for another West African country where French influence was not suffocating the development atmosphere too much. The small country of Guinea seemed to perfectly comply with Swiss foreign policy guidelines. The country's relations to France were more or less in tatters after Guinea's non-adherence to the French Community in 1958 and Swiss aid – so the argument went – could perfectly counterbalance the increasing communist in-

95 (BAR), E 2005 (A) 1978/137, 80, t.311-Elfenbeinküste, Projekte und Aktionen 1964–1966, Roy Preiswerk, *Possibilités pour la coopération technique suisse en Afrique occidentale d'expression française*, 07.05.1964, pp. 1–6, here: p. 2.

96 *Ibid.*, August R. Lindt to Finanzdelegation der Eidgenössischen Räte, 02.03.1964, pp. 1–2, here: p. 1.

filtration. In short, helping Guinea was a showcase for an active policy of neutrality.⁹⁷ The interests of the two countries were however mutual. DFTZ collaborator Erich Messmer's reception of a Guinean delegation in Bern in 1960 reveals the latter's urge for possible Swiss aid. The main agenda item then was Guinea's wish to redirect the flow of trainees from Conakry to Paris and to diversify the host countries for prospective studies. Against the backdrop of the opening of the MEDICAL SCHOOL in Dar es Salaam and the failure in Abidjan, medical aid as a possible area of Swiss intervention was however never far away. Like many African countries after independence, Guinea also envisaged the creation of a medical faculty on their territory and to be self-reliant in such crucial policy areas as health and welfare. The prospect of replicating the Dar es Salaam MEDICAL SCHOOL in Conakry silenced the more skeptical voices. One of the latter belonged to the Swiss consul in Conakry, Max Joss, for whom it was not evident how Guinea could ever manage to "produce" the adequate number of students to enter a medical faculty.⁹⁸ The discussions on the medical faculty however created a momentum of their own when Switzerland learned that the project was already underway with a building touching the Guinean sky at a height of over one hundred meters. Given this situation the question could only be whether or not Switzerland was willing to affirm its aid. Rémy Godet expressed the spirit reigning in the offices of the DFTZ most succinctly: "*Fortune favors the bold: given that things have already progressed considerably Switzerland can only choose between assuring or refusing its aid. According to the Political Division [...] it would be advisable to adopt a positive solution.*"⁹⁹

During 1964 and 1965, the contacts between Switzerland and Guinea evolving around the MEDICAL SCHOOL intensified. Only two days after August Lindt, in a letter to president Sékou Touré, confirmed Switzerland's commitment to the MEDICAL SCHOOL, Swiss and Guinean partners met at the STI in order to draw a clearer picture of possible Swiss support.¹⁰⁰ Present on behalf of the STI were Rudolf Geigy and his collaborator Michel Fernex, a trained doctor who would later built up the department of infectiology at ROCHE and with whom Geigy roughly sketched out the training institution's new medical curriculum. A few months later, the DFTZ concluded that they would reserve an amount of CHF 360'000

97 Jérôme Schuwey, *La Suisse et la Guinée de Sékou Touré. Les enjeux de la coopération technique au lendemain de l'indépendance (1958–1974)*, Mémoire de licence en histoire contemporaine présenté à la Faculté des Lettres de l'Université de Fribourg, Fribourg 2005, p. 43.

98 (BAR), E 2005 (A), 1978/137, 83, t. 311.004, *École de médecine Conakry*, Bd. 1, 1963–1966, Max Joss, *Faculté de médecine en Guinée*, 19.12.1963, pp. 1–2.

99 Ibid., Rémy Godet, *Création à Conakry d'une École de médecine*, pp. 1–2, here: p. 2.

100 Ibid., August Lindt to Sékou Touré, 27.05.1964.

as an investment to Guinea and that all the Guinean requests should be handled directly in the West African country.¹⁰¹ While a first Swiss mission comprising of Michel Fernex, André Aeschlimann, Robert-Henri Régamey and Otto Gsell were ready to investigate the issue on the spot, the information arriving from consul Joss was still far from being encouraging. According to him, the collaboration between the MINISTRY OF HEALTH and the MINISTRY OF EDUCATION in Conakry left much to be desired as far as this project was concerned. Furthermore, he suspected a misunderstanding at play between Switzerland and Guinea with regard to the amount of the Swiss contribution (indeed, Guinea expected a much larger sum than the DFTZ had budgeted for the planning period 1965–1967). Last but not least, Joss reported on the somewhat mercurial character of his interlocutor, the General Inspector for training at the MINISTRY OF EDUCATION, Louis Béhanzin, who at every opportunity reminded the Swiss official that Guinea was always ready to exchange Switzerland for a donor country from the communist block.¹⁰² Disregarding these dissonances, the impressions gathered by the Swiss mission in summer 1965 were consistently positive. In their report, and according to what they had already learned from Tanzania, the experts stressed that the school could in no way mean a “*transfer of European university models*” but a creation that is sensitive to the local constituencies.¹⁰³ Drawing from the same source of “*local*” appraisal, the authors concluded that the medical training in Conakry should not be highly specialized, that the doctors should also devote their time to the underserved rural areas and that preventive medicine should be given a high priority in the new medical curriculum.¹⁰⁴ The delegation’s final remark on behalf of the DFTZ reads as follows:

*“Based on all the experiences, the delegation concludes that the DftZ should adopt the project of supporting a medical faculty in Conakry not just for only a few but for at least ten years. This positive appraisal is derived from the impression that Guinea meets all the requirements concerning students, medical personnel and medical infrastructure. Furthermore, the expenses for Switzerland are tolerable because the funds can most likely be diversified.”*¹⁰⁵

101 Ibid., Notiz an Herrn Lindt. Medizinschule Conakry, Unterlagen für die Besprechung vom 29.10.1964, 26.10.1964, p. 1.

102 Ibid., Max Joss to August Lindt, 04.12.1964, p. 1, Max Joss to DftZ, 05.03.1965, p. 1, Max Joss to DftZ, 12.04.1965, p. 1.

103 Ibid., Bd. 2, 1964–1966, Rapport relatif à la création d’une école de médecine à Conakry. Mission des médecins suisses. Été 1965, pp. 1–25, here: p. 2.

104 Ibid., p. 4.

105 Ibid., Otto Gsell, Robert Régamey, André Aeschlimann, Faculté de médecine à Conakry, Guinée, 26.07.1965, pp. 1–17, here: p. 16.

Not surprisingly, given such favorable accounts, the DFTZ envisaged not only designing the school's curriculum but also being responsible for the "*complete planning*", as Lindt wrote enthusiastically in a letter to Otto Gsell.¹⁰⁶ The endorsement of the project of the MEDICAL SCHOOL by the DFTZ was in accordance with the plans and future position of the STI. Its members were sure that the new engagement would markedly enhance the institute's prestige and with Michel Fernex as the MEDICAL SCHOOL's appointed dean, the STI would have easy access to Guinea's medical sector.¹⁰⁷ On 20.01.1966, a new Swiss delegation once again ventured to Guinea in order to smooth out remaining ambiguities. This time, Michel Fernex was accompanied by Rolf Wilhelm and Pierre Nierlé, an architect specializing in medical infrastructure.¹⁰⁸ The renewed visit led to the signing of a mutual agreement on February 8th, 1966 but in the meeting with president Sékou Touré the encounter took an unprecedented twist.

*"The president expresses his deeply felt deception about the fact that Switzerland does not realize the whole project of a medical school. He reckoned with Switzerland taking the lead in the project (construction and training) while he accorded minor components to other countries (laboratory equipment). The president is very surprised to learn that Switzerland just wants to play the walk-on and is not ready to support the project entirely or to at least a very substantial extent. Therefore, the president regards the negotiations as having failed for good and envisages entering negotiations with another donor country."*¹⁰⁹

Sekou Touré's reaction was a considerable blow to the Swiss plans in the West African country. Indeed, discussions between the two parties still lingered on after the memorable meeting with Guinea's president but came to a decisive end with the expulsion of Swiss missionaries from the African country in 1967.¹¹⁰

106 Ibid., August Lindt to Otto Gsell, 22.10.1965, pp. 1–3, here: pp. 1–2.

107 Ibid., Tractanda de la séance qui se tiendra chez Monsieur Lindt, le 15 novembre à 16 heures, 15.11.1965, pp. 1–2, here: p. 1.

108 Ibid., Rolf Wilhelm to Roy Preiswerk, 22.12.1965, pp. 1–2, here: p. 1.

109 Ibid., Rolf Wilhelm, Notes prises au cours des discussions avec les représentants du Gouvernement Guinéen du 21.01 au 14.02.66, pp. 1–13, here: p. 11.

110 Schuwey, La Suisse et la Guinée de Sékou Touré, p. 69.

The daunting experiences made by Swiss development work in Guinea suggests that imagined or actual political relations between the colonial powers and the former colonial territories in East and West Africa do not fully determine the possibilities of Swiss development aid in Tanganyika and Côte d'Ivoire. Rather, the joint venture between the STI, the pharmaceutical industry and the DFTZ in Tanganyika and the inability of the CSRS to provide a base for private-public partnerships suggests that Swiss development aid in the 1960s needed strong private partners to really get off the ground. Private organizations, as it seems, were better positioned within the foreign aid industry than government agencies. They often had already long-established personal connections to the relevant circles in African countries and they – if necessary – could operate beyond the narrow confinements imposed by politics. Alexander von Muralt, who we encountered as initiator of the SNSF after WORLD WAR II, expressed this thought during a conference on the role of philanthropic institutions held in London when he asserted:

“It has generally been assumed that the private foundations are much more qualified to discover new research domains or other activities, to evaluate their possibilities and to deliver rapid and efficient aid in an early and critical stage. For governmental bodies all projects have to be placed within the limits of the political framework that was established in advance for each of the organizations.”¹¹¹

Von Muralt arrived at this conclusion after many years of acting as president of the NESTLÉ FOUNDATION which, in 1967, launched a project to investigate protein-calorie malnutrition in rural Côte d'Ivoire.

111 Alexander von Muralt, Colloque pour le 25e anniversaire de la Fondation CIBA “L’Avenir des Fondations Philanthropiques”, Londres, 16–19 juin 1974, 18.07.1974, pp. 1–4, here: p. 3.

THE NESTLÉ FOUNDATION AND THE DISCOVERY OF MODERATE-PROTEIN-CALORIE MALNUTRITION IN CÔTE D'IVOIRE

Not many commodities are as closely linked to Switzerland's national identity as chocolate. Widely unchallenged, chocolate represents the innovations of an industrial sector in Switzerland that proved highly resilient throughout the 19th and 20th centuries. The history of Swiss chocolate is closely bound to the economic and social history especially of West African states. After WORLD WAR I trading companies such as the UNITED TRADING COMPANY (UTC), an offshoot of the Basel mission society, entered the cocoa market in the Gold Coast (today Ghana) and provided Switzerland with the valuable raw material.¹¹² While in the first half of the 20th century, the Gold Coast was Africa's largest exporter of cocoa, in the 1970s, Côte d'Ivoire outstripped Ghana as the world's largest cocoa producer.

NESTLÉ's connections to Côte d'Ivoire dates back to 1959, when the company established its local branch CAPRAL and controlled large cocoa plantations south of Abidjan. The relations between the company and Ivoirian political circles were extremely close. NESTLÉ functionaries had easy access to the president's offices and fruitful collaboration was confirmed by Houphouët-Boigny's many visits to Switzerland. These mutual affinities and the vital importance of the West African country as a market for NESTLÉ has to be kept in mind when NESTLÉ decided to foster nutritional research in the African country. On the occasion of NESTLÉ ALIMENTANA's centenary in 1966, the general assembly announced the creation of a special FOUNDATION whose members would devote their professional lives to "*studying the problems of nutrition in the world.*" The FOUNDATION's daily business lay in the hands of director Serge Herzen, who enjoyed not only the support of von Muralt but of a series of highly decorated nutritionists. Indeed, the member list of the FOUNDATION board reads like a "*who is who*" in nutritional science at the time.¹¹³ Of special importance was Roger Whitehead who in 1968 became director of the MEDICAL RESEARCH COUNCIL's (MRC) MALNUTRITION RESEARCH UNIT, at what was by then the MAKERERE COLLEGE MEDICAL SCHOOL at Mulago in

112 Andrea Franc, *Wie die Schweiz zur Schokolade kam.*

113 As there were in 1969: Emil Mrak (University of California/Davis), Daniel Bovet (University of Sassari/Italy and Nobel Price in physiology 1957); Hugo Aebi (University of Bern); Norman Wright who replaced Friedrich T. Wahlen as deputy director-general of the FAO in 1959. Additionally, Roger Whitehead and Francis Aylward offered their valuable expertise, see: Fondation NESTLÉ pour l'étude des problèmes de l'alimentation dans le monde. Rapport annuel 1969.

Uganda.¹¹⁴ The first project launched by the FOUNDATION aimed to study the problem of malnutrition in Côte d'Ivoire. It was intentionally broad in scope and included medical as well as agricultural components. Apart from the already mentioned relevance of the West African country to the food company, the presence of the CSRS in Adiopodoumé facilitated the FOUNDATION's decision in favor of Côte d'Ivoire. In an agreement negotiated with the SNG, the two parties convened that NESTLÉ could extend the CSRS with a new laboratory building that would pass into SNG's property once the FOUNDATION had finished its research project in 1979.¹¹⁵



NESTLÉ Laboratory in Adiopodoumé, source: NESTLÉ FOUNDATION, Rapport Annuel 1972

114 Jennifer Tappan, *The True Fiasco. Efforts to Combat Protein Malnutrition in Uganda and the World 1950–1974*, Background paper for the Mellon Biennial Zuckerman Conference, April 2011, p. 9.

115 (SCNAT), Depot Burgerbibliothek Bern, GA SANW 829, Convention entre la Commission du Centre Suisse d'Adiopodoumé, représentée par son président, M. le Professeur Jean G. Baer, d'une part, et la Fondation NESTLÉ pour l'Étude des Problèmes de l'Alimentation dans le Monde, représentée par son président, M. le Professeur Alexandre de Muralt, d'autre part, 21.02.1969, pp. 1–3.

A “PROTEIN GAP”

The history of the NESTLÉ FOUNDATION in Côte d’Ivoire coincides with an episode in nutritional research roughly dating from the interwar period to the first critics in the 1970s, which was extremely powerful in explaining Third World hunger in terms of a lack of proteins. In the 1930s, Cicely D. Williams, the first female medical officer in the Gold Coast used the local term “*kwashiorkor*” to indicate a nutritional disease the “*deposed baby gets when the next one is born.*”¹¹⁶ The pediatrician associated “*kwashiorkor*” with an unbalanced maize diet and reported about promising success when treated early: “*Cases seen very early react well and promptly to an improved diet, rich in accessory substances. NESTLÉ’s sweetened condensed milk with cod-liver oil and malt seemed to be the most successful line of treatment.*”¹¹⁷ Williams’ protein hypothesis did not stir up nutritional research very quickly. More than two decades would elapse before the association between “*kwashiorkor*” and insufficient intake of proteins became the accepted hypothesis. After WORLD WAR II the UN organizations WHO and FAO paid increased attention to the disease and various experts started to investigate the relationship between protein deficiency, “*kwashiorkor*” and a series of other nutritional deficiencies.¹¹⁸ An important discursive event in further enhancing the “*protein dogma*” and to establish “*kwashiorkor*” as an exotic condition confined to the tropics was the report “*Kwashiorkor in Africa*”, published by J. F. Brock, professor of medicine in Cape Town and Dr. M. Autret, staff member of the FAO, after a field trip to Africa.¹¹⁹ The authors concluded that there was considerable freedom from disease in areas where meat, fish and or milk were relatively abundant. Consequently, they asserted that “*kwashiorkor*” could probably be contained through the distribution of skimmed milk and new protein-rich nutrients.¹²⁰ This proposition was taken up by various expert committees such as the PROTEIN ADVISORY GROUP (PAG), established in 1955 and providing advice to WHO, FAO and UNICEF on emerging high-protein but low-cost weaning foods.¹²¹

116 Cicely D. Williams, *Kwashiorkor. A Nutritional Disease of Children Associated with a Maize Diet*, in: *The Lancet*, Vol. 229, 1935, pp. 1151–1152, For the argument of a discovery of malnutrition in the interwar period see: Michael Worboys, *The Discovery of Colonial Malnutrition between the Wars*, in: David Arnold (ed.), *Imperial Medicine and Indigenous Societies*, Manchester, New York 1988, pp. 208–225.

117 Williams, *Kwashiorkor*, p. 1151.

118 Kalt, *Tiersmondismus in der Schweiz der 1960er und 1970er Jahre*, p. 420.

119 J. F. Brock and M. Autret, *Kwashiorkor in Africa*, Geneva 1952.

120 Kenneth J. Carpenter, *Protein and Energy. A Study of Changing Ideas in Nutrition*, Cambridge 1994, p. 149.

121 Joshua N. Ruxin, *Hunger, Science, and Politics. WHO, and Unicef Nutrition Policies, 1945–1978*, Ph.D. Study, University College London, London 1996, p. 106.

Not surprisingly given the credo that the stated problems would most easily be overcome through the production and introduction of high protein supplements to various Third World localities, the “*myth*” of protein deficiency was at the basis of NESTLÉ’s engagement in Côte d’Ivoire. During a scientific symposium held in 1969, Alexander von Muralt reiterated what had become one of the most watertight dogmata of Western thinking in relations to the Third World:

“The most serious problem in many developing countries is not the supply of calories [...] but the supply of a sufficient amount of protein in order to overcome the protein-calorie malnutrition. This problem must be considered as the most urgent one among all the other problems in the fight against hunger.”¹²²



NESTLÉ laboratory van, source: Nestlé Foundation, Rapport Annuel 1972

122 Alexander von Muralt, Preface, in: Von Muralt, (ed.), Protein-Calorie Malnutrition. A NESTLÉ FOUNDATION Symposium, Berlin 1969, pp. VII.

NESTLÉ saw the innovation of their research project in Côte d'Ivoire in the fact that it tried to apply the most “sophisticated” biomedical methods to the rural countryside.¹²³ NESTLÉ researchers relied on Whitehead's recently developed techniques to detect metabolic changes in the urine of kwashiorkor patients. However, more eye-catching for rural dwellers was the massive laboratory van that occasionally blew up clouds of dust into the Ivorian sky, arriving as mobile sign of modernity at the doorstep of rural communities. Thus, while the laboratory in Adiopodoumé served simply as the headquarters for the execution of biochemical assays, it was the more remote areas which, according to the widespread development thinking of the 1960s and 1970s, attracted NESTLÉ's attention. One of the rural villages NESTLÉ especially turned to was Kpouébo, chosen as an experimental site by president Houphouët-Boigny himself and located in the “V Baoulé” in central Côte d'Ivoire, from where the president originated. Presidential support facilitated the launching of NESTLÉ's research projects. Political village leaders could do nothing but comply with NESTLÉ's research plans. However, one of the more fundamental and serious issues NESTLÉ had to grapple with was whether or not the Ivorian rural areas were indeed the right place to study the problem of malnutrition as intended. As it turned out, Von Muralt's first scientific exploration of the area ended in disenchantment. In a report dedicated to Houphouët, he recalled their first talk about the most suitable intervention areas and the disillusion soon after:

“During our talk I asked you to indicate to me the most suitable area for executing our nutrition project. After thinking about it a short while you answered: “The region of the Baoulé's sacred mountain “Orumbo Boaka”. It was thus in Kpouébo, a small village of 1'850 inhabitants located in this region, where we established ourselves. I do not hide the fact that at the beginning of our work we – as researchers – were a little bit disappointed to encounter a relatively healthy population in this area and especially children whose health status seemed fairly good. No kwashiorkor nor marasmus.”¹²⁴

The absence of any forms of protein-calorie malnutrition among the villagers of Kpouébo was confirmed by the researchers on the spot. Kurt Schopfer, who together with his wife, entered the field in 1972 as a young scientist interested in pediatrics, recollected that the children's diet was not at all characterized by a lack of proteins but apart from yams and plantains consisted of chicken, fish and fruits.

123 Archives Historiques NESTLÉ (AHN), 9564–22, Communication interne, 1967–1970, Alexander von Muralt, Réflexions sur le but et les résultats du voyage en Côte d'Ivoire, 22.10.1970, pp. 1–9, here: p. 1.

124 Archiv NESTLÉ Foundation, Lausanne, Alexander von Muralt, Introduction, in: Rapport au Gouvernement de la Côte d'Ivoire sur les premiers résultats de notre travail 1970–1972, Lausanne 1972, p. 2.

“The population’s diet was well-balanced but the NESTLÉ FOUNDATION had difficulties in accepting these finding because they by all means wanted to sell their products and open up Côte d’Ivoire as a market.”¹²⁵

The NESTLÉ FOUNDATION and NESTLÉ ALIMENTANA urged their research collaborators on the ground to eventually come up with clear indicators for the prevalence of protein-calorie malnutrition but the children living Kpouébo primarily suffered from malaria and diarrhea rather than protein deficiencies. The proposition to define the people of Kpouébo as suffering from “*moderate protein-calorie malnutrition*” was more a desperate attempt to gloss over the “*daunting realities*” encountered in the field than a sound scientific explanation. The ideological tensions between NESTLÉ ALIMENTANA, the FOUNDATION and researchers based in Adiopodoumé erupted during the 1970s, when NESTLÉ’s activities in the Third World became the prime targets of a rising solidarity movement in Switzerland and elsewhere.

THE INFANT FORMULA CONTROVERSY

It was during the first years of the 1970s when NESTLÉ’s activities in the Third World and the policy of propagating milk powder instead of breast-feeding entered public awareness. Many pediatricians and third world organizations more or less directly related the high numbers of infant mortality in Africa to the economic aspirations of food companies such as NESTLÉ and others. In 1974, the British organization WAR ON WANT published their study “*The Babykiller*” in which they hinted to the fatal consequences of bottle-feeding in world regions where tapped and clean water is not a matter of course. The very same year, the ARBEITSGRUPPE DRITTE WELT (Working Group Third World) in Switzerland translated the study into German. Their new title “*NESTLÉ tötet Babys!*”(NESTLÉ Kills Babies) was not only more provocative but unambiguous about whom they addressed. NESTLÉ’s answer to the publication was straightforward. Only a few weeks after publication, the company filed an action against the ARBEITSGRUPPE DRITTE WELT that ended in success for those who accused the company’s practices as unethical in 1976.¹²⁶ In the second half of the 1970s, the “*infant formula controversy*” shifted to the USA, where a coalition of different organizations launched an international boycott against NESTLÉ, which was not mitigated until 1984, ten years after the debate gained public exposure.¹²⁷

125 Interview mit Kurt Schopfer, 12.04.2012. In the early 1970s, the Foundation experimented with “*FORTIRAN*”, a protein-supplement containing wheat, soya and chickpea produced by NESTLÉ in Vevey, as well as “*IGNASSON*”, a mixture of yams (“*igname*”) and fish (“*poisson*”) modeled after a similar product marketed in the Chad. However, both products never went beyond experimental stage.

126 Kalt, Tiersmondismus in der Schweiz der 1960er und 1970er Jahre, p. 427.

127 Ibid., p. 406.

The cleavages of the controversy about Third World hunger and unethical practices of multinational corporations were more complex than just separating scientists from political activists. Concerns about the NESTLÉ's food policies in the Third World was not only uttered from the "grass roots" but raised by well-known scientists too. High-level support came from Derrick B. Jelliffe from the CARIBBEAN FOOD & NUTRITION INSTITUTE and from his wife Eleanore F. Patrice Jelliffe, who from the outset pointed to the danger of promoting infant formula for Third World children. In an article published in 1971, Derrick Jelliffe coined the term "*commerciogenic malnutrition*" in order to describe the detrimental impact of industry marketing practices on infant health.¹²⁸ Patrice Jelliffe was no less outspoken when, during a conference that also enjoyed the presence of Alexander von Muralt, she declared: "*Human milk can in no way be replaced or compared with the standardized formulae manufactured by the alchemists of the food industry, ever anxious to learn the trade secret of the home recipe.*"¹²⁹

The debates about the characteristics of human milk have to be placed within a larger history of an increasing commoditization of the liquid that had its roots in the 19th century. It was then, whether by merit or default, the discourse of naturalization of breast-feeding and motherhood was challenged by a scientific gaze that unraveled the sphere of intimacy and evaluated the nutritional quality of human milk and more generally the role of mothers within society at large.¹³⁰ The transformation of breast milk into an aliment had a strong moral component because the experts' efforts were directed towards the living-conditions of underprivileged "*classes.*" Not surprisingly, the liquid and its surrounding practices played a vital role within the project of colonialism. Taking the example of the Belgian Congo in the first half of the 20th century, historian Nancy Hunt showed how the colonial government – driven by fears of population decline – tried to alter infant feeding practices and to firmly establish milk consumption as a local diet.¹³¹

The postcolony did nothing to alter the European obsession with African human milk. What however changed in the 1970s was that not only the breast-feeding practices of African women came into the focus of Western scientists but also that the practices of the

128 Derrick Jelliffe, *Commerciogenic Malnutrition? Time for a Dialogue*, in: *Food Tech*, Vol. 25, No. 2, 1971, pp. 55–56.

129 E. F. P. Jelliffe, *Maternal Nutrition and Lactation*, in: *Breast Feeding and the Mother*, pp. 119–139, here: p. 129.

130 Kalt, *Tiersmondismus in der Schweiz der 1960er und 1970er Jahre*, p. 416.

131 Hunt, "*Le Bébé en Brousse*". *European Women, African Birth Spacing and Colonial Intervention in Breast Feeding in the Belgian Congo*, in: *The International Journal of African Historical Studies*, Vol. 21, No. 3, 1988, pp. 401–432.

scientists themselves were subject to a global discourse, which centered on the interdependency between the First and the Third World. It is however important to acknowledge that the discourse was not just one between two opposed camps but more so between the NESTLÉ FOUNDATION, with a prefabricated understanding about the situation in which rural African dwellers lived, and the scientists for whom working in Côte d’Ivoire opened up completely different perceptions.

UNPACKING IDEOLOGIES: ECHOES FROM THE FIELD

Not surprisingly given science’s obsession with human milk, NESTLÉ researchers Edgar Lauber and Michael Reinhard working in Kpouébo turned their attention early on towards the composition and the quality of mothers’ breast-milk and to the intimate realm of breast-feeding. In accordance with the context in which they worked but in dissonance to the expectations they had to meet, they could hardly find fault with the human liquid, even compared to European standards. Consequently, the annual report of 1974 stated:

“Observations until now show that the breast milk of all the mothers, even of those who suffer from marginal protein-calorie malnutrition is excellent compared to Western standards.”¹³²

The laboratory findings, however, revealed a decrease in protein concentrations over the first semester of lactation – a finding which, of course, was not at all *“specific to Africa”* and the consequences of which could not finally be assessed.¹³³ Not surprisingly, given the heated political debates about whom to render accountable for the poor reception of milk powder in the Third World – the unskilled handling and sterilization of the bottles, the government’s failure to offer hygienic conditions or the *“ignorance”* of the mothers – the assumptions of a *“comparatively good quality of breast milk”* provided by Lauber and Reinhard put a strain on the relationship between NESTLÉ ALIMENTANA and its FOUNDATION. In a conciliatory manner, Alexander von Muralt, during a meeting between NESTLÉ representatives and members of the FOUNDATION, underscored the fact that the two scientists’ findings could not be easily extrapolated. They were gathered in Côte d’Ivoire and therefore only

132 (AHN), Rapport Annuel 1974, p. 11.

133 Edgar Lauber, Michael Reinhardt, Studies on the Quality of Breast Milk During 23 Months of Lactation in a Rural Community of the Ivory Coast, in: The American Journal of Clinical Nutrition, Vol. 32, 1979, pp. 1159–1173.

valid for this West African country.¹³⁴ Moreover, at stake was not just the protein content of the women's breast milk but the "brutal" weaning practices consisting of abruptly exposing the children from breast-feeding to a protein poor adult diet that would still justify the distribution of NESTLÉ's products in Côte d'Ivoire.¹³⁵ Von Muralt's balancing act between protecting the work of his scientists in Kpouébo and repudiating the international accusations he classified as "pseudo-scientific, irresponsible and ill-founded" did not convince those with clear ideological affinities.¹³⁶ For instance, John Dobbing, working at the University of Manchester and who would later contribute his biased views in his book *Infant Feeding. Anatomy of a Controversy*, could not understand why the FOUNDATION published the Kpouébo results and in so doing strengthen Jelliffe's argument about the irreplaceable value of breast-feeding.¹³⁷ "An openly expressed agreement with the findings of Mrs. Jelliffe (in fact she has none) reads strangely in the present delicate state of your affairs," he wrote in a letter addressed to NESTLÉ's executive board and added: "I know that the Foundation is quite independent, but it is regrettable that its publication was not delayed a few months."¹³⁸ NESTLÉ's reaction to John Dobbing's bewilderment was formulated by NESTLÉ executive Jacques Paternot and revealed NESTLÉ's effort to interpret the results in favor of NESTLÉ's general policy. All the Kpouébo study could confirm was that

"[...] a) Ivoirian mothers are not [...] able to produce unlimited amounts of milk, b) that the quantity of milk decreases from the 6th month onwards and c) that the percentage of the protein content of their breast milk is 30% less compared to European mothers." Taken together the empirical data "shows the validity of our position; African mothers more than their European counterparts need our food supplements. We never argued otherwise nor did we stop to deliver our products to all those who need them. Thus, this study is a strong argument in favor of our position."¹³⁹

134 (AHN), 9564-1, Administration, 1972-1979, E. Fasel, Visite à la Fondation NESTLÉ le 20 aout 1976, 23.08.1976, pp. 1-6, here: p. 2.

135 Alexander von Muralt, Dix ans de Fondation NESTLÉ. Message du Président sortant, in: (AHN), Fondation NESTLÉ, Rapport Annuel 1977, pp. 2-3.

136 (HAN), 9564-4, Séances du Conseil, 1973-1975, Serge Herzen, Attaques contre les fabricants d'aliments pour enfants en général, et contre NESTLÉ en particulier, p. 1.

137 John Dobbing (ed.), *Infant Feeding. Anatomy of a Controversy*, 1973-1984, London 1988.

138 (AHN), 9564-1, John Dobbing to M. Gloor, 30.07.1976, p. 1.

139 Ibid., Jacques Paternot to Arthur Fürer, 11.08.1976, p. 1.

KWASHIORKOR – AN URBAN AND SOCIAL CONDITION

Not everyone saw things as clearly as Jacques Paternot did. Facing fierce resistance from the members of the FOUNDATION, Kurt Schopfer finally managed to depart from Kpouébo and to study malnutrition in the HÔPITAL UNIVERSITAIRE DE TREICHVILLE in Abidjan, where children with clear symptoms of kwashiorkor were admitted. Together with Steven Douglas from the MOUNT SINAI SCHOOL OF MEDICINE in New York, he published a series of articles that explored the host defense mechanisms of kwashiorkor patients and their susceptibility to infectious disease.¹⁴⁰ The major reason for kwashiorkor encountered in the hospital were viral infections such as measles, poor hygienic conditions and poverty in general, which was the fate of all those forced to live in Abidjan's precarious urban environment. "*Malnutrition was closely related to poverty as experienced in the rapidly growing outskirts of Abidjan and not at all a rural condition.*"¹⁴¹ Convinced about this specific social context where malnutrition occurred, Schopfer, in collaboration with W. Page Faulk from the DEPARTMENT OF IMMUNOLOGY of the WHO, once again turned his attention to the rural countryside. This time not Kpouébo but the small village of Syélékaha, adjacent to the northern town Korhogo, was selected for nutritional investigation. The study design was straightforward. After preliminary consultation, a cohort of children living in the village was divided into two groups. During a period of some months they were given a daily portion of rice and only one group a protein supplement in addition. Following this, the two groups were compared and their immune response to certain vaccination measured.¹⁴² The results did not show any significant differences between the two groups in relation to their immune responses. There were no parameters for malnutrition found between the two cohorts and this is probably one of the reasons why publishing the results was never envisaged by the NESTLÉ FOUNDATION.¹⁴³ The Korhogo study added further credentials to the fact that medical investigation alone was not the right instrument to scientifically establish "*protein-calorie malnutrition*" as a condition for the Ivoirian countryside. Consequently, the NESTLÉ FOUNDATION's final efforts in Côte d'Ivoire witnessed a shift from the breast to the brain by exchanging pediatricians with psychologists.

140 Steven Douglas, Kurt Schopfer, Phagocyte Function in Protein-Calorie Malnutrition, in: *Clinical & Experimental Immunology*, Vol. 17, No. 1, 1974, pp. 121–128, Kurt Schopfer, Steven Douglas, Neutophil Function in Children with Kwashiorkor, in: *The Journal of Laboratory and Clinical Medicine*, Vol. 88, No. 3, 1976, pp. 450–461, Kurt Schopfer, Steven Douglas, Fine Structural Studies of Peripheral Blood Leucocytes from Children with Kwashiorkor. Morphological and Functional Properties, in: *British Journal of Haematology*, Vol. 32, No. 4, 1976, pp. 573–577.

141 Interview with Kurt Schopfer, 12.04.2012.

142 (AHN), Fondation NESTLÉ, Rapport Annuel 1974, pp. 8–9.

143 Kurt Schopfer, personal communication.

MALNUTRITION AND THE AFRICAN BRAIN

On June 28th-29th 1971, members of the NESTLÉ FOUNDATION in Lausanne discussed the nutritional data as it presented itself after three years of intense research in Côte d'Ivoire. To the experts' big surprise, the anthropometric and biochemical assays did not materialize in a scientifically sound picture of clinical malnutrition. One of the attendees mused whether the low-protein intake and the elusive signs of malnutrition is the result of a genetically acquired adaptation.¹⁴⁴ Another expert confirmed the anthropometric data was within "accepted" standards but was nevertheless quite sure "that the mental development is affected." "Physiological tests on school children in Kpouébo", he was convinced, "would certainly show a mental deficiency."¹⁴⁵ Approaching the issue of the effects of malnutrition on "the brain", the NESTLÉ FOUNDATION did not just link in a contemporary and highly controversial debate, but focused on a topic that was closely connected to colonialism and racial science. Since the beginning of the 19th century and the advent of new scientific disciplines such as comparative anatomy, the brain has become "the" epistemic object whose surface allowed for the drawing of conclusions about the "nature of man." However, as Nancy Stepan has shown, scientific arguments which put Western "civilization" on the highest echelons of evolution and which explained the differences between "races" in biological terms, was not a phenomenon of the 19th century. The idea of the innate difference between blacks and whites and an understanding of the brain as the "arbiter of all things racial" proved highly tenacious throughout the 20th century.¹⁴⁶

While from the mid-1960s onwards, the field of ethnopsychology was challenged by more broader accounts of transcultural psychiatry which found its clientele no longer entirely in colonial subjects but in people living on the fringes of Western societies, the question of "intelligence" of the underprivileged re-emerged as a prime topic among the world's leading nutritionists in the 1970s.¹⁴⁷ Leading figures in this newly emerging field of intelligence testing were scientists from Latin America, working in the slums of the burgeoning Latin American metropolises. Unprecedented in terms of range and methodology was the "Bogotá research project", under the leadership of Fredrick J. Stare (HARVARD SCHOOL OF PUBLIC

144 (AHN), 9564-4, Minutes of the 7th meeting of the Council, Lausanne 28 and 29 June 1971, pp. 1-28, here: pp. 7-8.

145 Ibid., p. 8.

146 Nancy Stepan, *The Idea of Race in Science. Great Britain 1800-1960*, Oxford 1982, p. 18.

147 For a history of ethnopsychology in a colonial context, see: Jock McCulloch, *Colonial Psychiatry and the African Mind*, Cambridge 1995.

HEALTH) and financed partly by the NESTLÉ FOUNDATION.¹⁴⁸ IQ tests with several siblings should reveal to which extent genetic and environmental factors could be excluded in explaining the relationship between malnutrition and intelligence. The question was however not entirely one of biological determinism but rather how malnutrition detected in children living in economically deprived settings and disregarding their ethnic origin might account for their lower IQ scores compared to their privileged peers. There were several rather controversial strings attached to this kind of scientific venture. Disregarding the Eurocentric devices with which “*intelligence*” was measured, the causal link between malnutrition and mental capacity was often more assumed than scientifically proven.¹⁴⁹ Several experiments with animals suggested a strong relationship between severe protein-deficiency and the growth and organization of the brain, but the fundamental question of course was whether or not this data could be extrapolated to humans. Gazing through the lenses of a physiologist, Alexander von Muralt found no difficulties in drawing analogies between animal and human experimental models. “*For a physiologist the close link between the cellular and biochemical structures and their function is a solid concept. A damage or distortion of structure is always a sign and cause of impairment of function. In the human brain, early malnutrition per se produces distortions similar to those in experimental animals and, therefore, its function must be impaired.*”¹⁵⁰ In his attempt to transform a rather hazardous hypothesis into “*hard*” scientific facts, von Muralt admitted that the human brain in early childhood deployed a stunning “*plasticity*” and an ability to mitigate serious localized lesions, but since malnutrition has a more general damaging effect on the brain, it is more than doubtful whether the brain could outweigh the detriments of early malnutrition.¹⁵¹ Thus, while the direct correlation between severe malnutrition and mental capacity was almost considered as a “*fait accompli*”, the question whether this situation was irreversible or not and whether statistical significance could also be attained in people suffering from only moderate PCM was still open to debate. The latter question was not only scientifically thrilling but had wide-ranging political implications. Considering the case of Côte d’Ivoire, one of the NESTLÉ scientists frankly contended:

148 (AHN), Fondation NESTLÉ, Rapport Annuel 1971, p. 7.

149 Michael C. Latham, Protein-Calorie Malnutrition in Children and Its Relation to Psychological Development and Behavior, in: *Physiological Reviews*, Vol. 54, No. 3, 1974, pp. 541–565.

150 Von Muralt, Influence of Early Protein-Calorie Malnutrition on the Intellectual Development. The Point of View of a Physiologist, in: M. A. B. Brazier (ed.), *Growth and Development of the Brain. Nutritional, Genetic and Environmental Factors*, New York 1974, pp. 307–314, here: p. 311.

151 *Ibid.*

*“[...] human intelligence depends directly on the quality of nutrition. In Côte d’Ivoire, general intelligence is low – too low to understand the basic rules of let’s say hygiene or family planning.”*¹⁵²

Not surprisingly given such political ramifications, the “*moderate malnutrition-intelligence-complex*” was highly appreciated as a topic to be engaged with during several scientific conferences and symposia held throughout the 1970s. For instance, during the “*First International Symposium on Brain and Intelligence*” held in Miami in 1971, scientist Fernando B. Monckeberg offered his conclusions, drawn from his experiments with rats and humans about the “*effects on brain growth and intellectual development.*” According to him and in accordance with other researchers such as Joaquin Cravioto, there was no reason to doubt that severe malnutrition causes mental deficits on a permanent basis.¹⁵³ However, in children who suffer sub-clinical forms of PCM, the relationship between cause and effect was not as consistent because of many “*environmental factors that may negatively influence capacity.*”¹⁵⁴ This scientific modesty was shared by NESTLÉ scientist, Gian Paolo Ravelli, who happened to sit on the same panel with Monckeberg presenting his data drawn from Côte d’Ivoire. What he had to say about the topic was rather vague and prone to all sorts of guesswork. Ravelli introduced his study with the following words:

*“We did not try to establish a relationship between the nutritional status, our findings, and the possible consequences it might have on the mental and intellectual development of the child. We didn’t go as far as Dr. Monckeberg did. So, I am afraid that I will perhaps give a kind of flash picture of the nutritional status in this area and that particular village and you have to guess which consequence this situation might have on the development of the children who live there.”*¹⁵⁵

The “*flash picture*” Ravelli was sorry about is nevertheless the result of a complex mechanism of hiding and revealing of scientific data. The nutritional status of the children involved was established through a mixture of anthropometric (weight/age ratio, head, chest and

152 (AHN), 9564–1, anonymisiert, Visite à la Fondation NESTLÉ le 20 août 1976, 23.08.1976, pp. 1–6, here: p. 3.

153 Fernando B. Monckeberg, *Effects of Nutrition on Brain Growth and Intellectual Development*, in: Frederick Richardson (ed.), *Brain and Intelligence. The Ecology of Child Development*, Hyattsville Maryland 1973, pp. 207–228, here: p. 229.

154 *Ibid.*, p. 221.

155 Gian Paolo Ravelli, *Study of Malnutrition among Preschool-Age Children in a Village of the African Brush – Ivory Coast*, in: Richardson (ed.), *Brain and Intelligence*, pp. 257–265, here: p. 257.

head circumference) as well as through biochemical assays (blood/urine). The 72 children living in the small village of Adahou (Toumodi) were then divided into different categories according to their weight-for-age ratios. While none of the biochemical tests showed any signs of PCM, Ravelli found 22 infants who could be classified as suffering from “*moderately severe PCM*” – a result that was not entirely supported by the other anthropometric data.¹⁵⁶ Without mentioning the remaining 50 (all settled within the “*norm*”), Ravelli could nevertheless not exclude that this “*moderate PCM*” “*may have a profound and lasting effect on the population as a whole.*” And: “*It is therefore essential to change the nutritional pattern for these children by introducing the notion of a special baby meal, to be prepared by the mother aside from the family meal and offered three times a day.*”¹⁵⁷

While Ravelli remained in the realm of speculation as far as the relationship between moderate PCM and African intelligence was concerned, psychologists working in the tradition of Jean Piaget at the University of Geneva aimed at tackling the issue more thoroughly.¹⁵⁸ Piaget, who studied with Alfred Binet – “*the father of IQ-testing*” – in Paris, had a complex understanding of human intelligence. With the risk of simplifying a serious intellectual endeavor, one can say that the basic tenet of Piaget’s notion of human intelligence is one’s capacity to adapt to the environment.¹⁵⁹ Piaget proposed a six-stage model that unfolded in an evolutionary manner, with each stage referring to the development of cognition (and thus “*intelligence*”) of the observed child. For the Swiss psychologists, Piaget’s model seemed to be worth trying out in an African context, not least because it was formulated with a universal claim. The problem with all universality was of course the one Monckenberg referred to earlier. Was it not likely that the worst enemy of statisticians – the environment – would impinge on and even distort the statistical significance between the variables “*moderate malnutrition*” and “*mental capacity?*” Once again, Kpouébo could provide relief. For Pierre Dasen, a researcher at the University of Geneva and principal investigator of NESTLÉ’s psychological study, the location was the ideal choice because the village displayed a considerable “*cultural and socio-economic homogeneity*”, so as to mitigate possible

156 Ravelli, *Enquête nutritionnelle en milieu rural africain. Village d’Adahou, S/P de Toumodi, Côte d’Ivoire*. Thèse présentée à la Faculté de Médecine de l’Université de Berne, pour l’obtention du titre de Docteur en Médecine, Berne 1972, p. 39.

157 Ravelli, *Study of Malnutrition among Preschool-Age Children*, p. 265.

158 Pierre Dasen et al., *Naissance de l’intelligence chez l’enfant Baoulé en Côte d’Ivoire*, Bern 1978.

159 Jean Piaget, *La naissance de l’intelligence chez l’enfant*, Neuchâtel 1959, Dasen, *The Cross-Cultural Study of Intelligence. Piaget and the Baoulé*, in: *International Journal of Psychology*, Vol. 19, No. 4/5, 1984, pp. 407–434, here: p. 408.

interference by environmental factors.¹⁶⁰ In order to measure mental capacity of infants, Dasen applied a standard scale, derived from Piaget' insights and elaborated by Irène Casati and Irène Lézine, which included a) searching for lost objects, b) using intermediaries, c) exploration of objects, and d) combining different objects as markers for intelligence. The study design involved two groups that diverged according to their nutritional status previously evaluated through anthropometric and biochemical assays. The results did not show major differences in senso-motoric abilities between the two groups and if there were any correlations between moderate PCM and intelligence, then this relation could only be found beyond "*narrow statistical criteria*."¹⁶¹ However, one area where the two groups differed considerably was in their ability to experiment with new objects. "*This is a very important aspect of intelligence in the senso-motoric stage, as well as in all the following stages. In fact it is through manipulating the objects and the relations between objects through which the child constructs its consciousness.*"¹⁶²

NESTLÉ's project was not enduring. Nor was its research project translated into anything concrete in favor of the local population. In September 1981, researchers from the FOUNDATION abandoned their scientific station in Kpouébo. This special occasion once again brought together several NESTLÉ representatives, high-ranking politicians from Abidjan and the villagers from Kpouébo, in order to look back on a decade-long presence of NESTLÉ researchers in the village and to negotiate the handing-over procedure of the scientific infrastructure to the inhabitants of Kpouébo. One representative of the MINISTRY OF HEALTH proudly addressed the villagers and reminded them that they should always collaborate as they had done in order for Kpouébo to "*overcome its lethargy.*"¹⁶³ With the retreat from Kpouébo and other experimental villages in Côte d'Ivoire, the NESTLÉ FOUNDATION FOR THE STUDY OF THE PROBLEMS OF NUTRITION IN THE WORLD ended its commitment to fight against hunger in the West African country and directed its attention to other world regions.

160 Dasen et al., *Naissance de l'intelligence*, p. 39.

161 *Ibid.*, p. 270.

162 *Ibid.*, p. 273.

163 Joseph Kouassi, *La Fondation NESTLÉ quitte définitivement la région*, in: *Fraternité Matin*, Lundi, 21.09.1981, p. 10.

VARIATIONS OF DEVELOPMENT AND THE POWER OF PHENOMENOTECHNIQUE

In summary, the chapter suggested that at the eve of African independence, Switzerland emerged as a key player in the development aspirations of the African continent. Development was such a powerful category that it reassembled and enrolled various Western and African protagonists in this new field of foreign policy. One of the most pertinent players in the landscape of Swiss development at the beginning of the 1960s was the STI and a handful of zoologists, who managed to introduce themselves to the DFTZ as indispensable experts for Tanganyikan health problems. The success of the STI in mobilizing the different players is not just due to the close entanglement of science and policy – as “*resources for each other*” to use an expression by Mitchell G. Ash – but due to the historical trajectories of these specific players and their ways of interpreting their present situation and their future strategies.¹⁶⁴

The ideological undercurrent that held together the various protagonists was the assertion that African societies could be improved (i.e. transformed) through Western scientific tools. The “*Lumemo Project*” is a prime example of this mindset, as well as of the complex interactions between the different Western and African development players. While the Swiss proposals did not survive the competition with a more potent political actor, the German proposals witnessed a serious drawback in the context of Tanzania’s accreditation of a consulate of the German Democratic Republic, after which Western Germany withdrew all its development expenditure to Tanzania.

The possibilities to mount such large-scale development projects were not always given. While Geigy and the pharmaceutical industry entered successful private-public partnerships in Tanganyika, the CSRS – lacking a long-term strategy – was henpecked by French science and remained largely unattractive for private collaborators. The strong French presence was one of the reasons why official Swiss development aid was cautious to move a foot forward to Côte d’Ivoire, but French absence, in turn, was not guaranteed to render development aid successful. As the example of a MEDICAL SCHOOL in Guinea has shown, African politicians and functionaries very cunningly capitalized on Western development efforts and took advantage of a dichotomized world order to play potential donors off against each other.

164 Mitchell G. Ash, Wissenschaft und Politik als Ressourcen für einander, in: Rüdiger vom Bruch and Brigitte Kaderas (eds.), Wissenschaften und Wissenschaftspolitik – Bestandaufnahmen zu Formationen, Brüchen und Kontinuitäten im Deutschland des 20. Jahrhunderts, Stuttgart 2002, pp. 32–51.

On the other hand, the strong technoscientific relations forged between France and its former colonies did not prevent all Swiss development actors from staying away. Private charities such as the NESTLÉ FOUNDATION maintained close relations to the highest levels of Ivoirian politics and were passionately welcomed to implement their research plans. The political network was, however, just one side of the coin explaining the power of NESTLÉ in Côte d'Ivoire. The other side consisted more abstractly of NESTLÉ's ability to apply modern scientific devices to the rural countryside, in order to construct "*Moderate Protein-Calorie Malnutrition*" as rural pathology which would possibly be overcome by NESTLÉ's homebrewed solutions. NESTLÉ's power to apply modern biochemical methods to rural areas and to derive general assumptions of African "*intelligence*" are best captured by the term "*phenomenotechnique*", coined by philosopher of science Gaston Bachelard, in order to describe that certain objects of knowledge are not given entities but created through scientific instruments which themselves are embodiments of scientific knowledge. Science in other words "*realizes*" its objects in the double sense of the word.¹⁶⁵ However, the power to realize the scientific objects constantly caused disapproval by NESTLÉ scientists themselves. Especially those working in the field had difficulties to reduce "*kwashiorkor*" to protein deficiency only and interpreted the disease as the outcome of a complex interplay of social, environmental, infectious, immunological as well as nutritional factors. In so doing, they shared the view with the many physicians and scientists working in Tanzania who went beyond the scope of their academic disciplines and embraced the views offered by social medicine.

165 Hans-Jörg Rheinberger, Gaston Bachelard und der Begriff der "*Phänomenotechnik*", in: Marc Schalenberg and Peter Th. Walther (eds.), "*... immer im Forschen bleiben.*" Rüdiger vom Bruch zum 60. Geburtstag, Stuttgart 2004, pp.297–310, here: p.304.

CHAPTER 5

The Empire “Re-Treats.” Medical Research, Development and the Rise of Social Medicine in Tanzania and Switzerland, 1960—1980

RURAL HEALTH DEVELOPMENT IN TANZANIA

In 1967, Julius Nyerere published the “*Arusha Declaration*” in which he outlined his conceptions of an “*African socialism*.”¹ The foundational pillars for a reframed Tanzanian society were the concepts of “*ujamaa*” (familyhood) and “*kujitegemea*” (self-reliance), both of which were designed as a development strategy mainly for the rural countryside. While “*ujamaa*” envisioned the creation of “*ujamaa villages*” serving as social and productive units at the same time, self-reliance obliged the citizens to contribute their labor and resources to build up the nation.² The health sector was a favorite playing ground for putting socialist ideas into practice. As has been mentioned earlier, the Second Five Year Plan (1969–1974) differed from earlier attempts in that it put rural health care on the top of the development agenda. More importantly perhaps, the plan was guided by the conviction that bringing about basic health services more closely to the rural masses was not to be attained without serious financial investment. For the first time in 1972, the sums allocated to rural health centres and dispensaries surpassed the allocations to hospital services.³ The project of restructuring rural livelihoods in political, social and economic terms did not go without foreign influence. One of the model countries for what could be achieved in rural health was the People’s Republic of China, whose “*barefoot doctors*” had been heralded as the

1 The Arusha Declaration and TANU’s Policy on Socialism and Self-Reliance, Dar es Salaam 1967, Julius Nyerere, *Freedom and Socialism*, in: Nyerere, Nyerere on Socialism, Dar es Salaam 1969, pp. 27–58.

2 Rebecca Marsland, *Community Participation the Tanzanian Way. Conceptual Contiguity or Power Struggle?*, in: *Oxford Development Studies*, Vol. 34, No. 1, 2006, pp. 65–79.

3 MINISTRY OF HEALTH (MOH)/Library, *Budget Speech by the Minister for Health, Hon. A. H. Mwinyi, MP, for the Year 1972/1973*, pp. 1–25, here: p. 4.

appropriate solution to Third World health, even in the West.⁴ Intrigued by the success of the de-professionalized and decentralized health services flowering out of China's Cultural Revolution, in 1968 Nyerere invited Chinese medical teams to Tanzania, who then offered their services to the rural communities living in eight remote districts.⁵ The Chinese experience provided the blueprint for the introduction of so-called "village medical helpers" to ujamaa villages. The individuals in charge were selected and salaried by the villagers themselves and underwent 6 months of training in a hospital in order to be prepared to apply first aid measures and prevent the most prevalent diseases.⁶ The chapter argues that the second half of the 1960s constituted a radical shift from former colonial health policies, in that the link between health and development was reversed. The changing political environment in Tanzania forced Swiss development initiatives to undergo transformation for their part and to embrace new concepts of community medicine and African socialism. However, health improvement within the context of rural transformation was again one of the major arguments for the government to forcefully shift the rural population into Ujamaa villages.

As has been discussed in the context of the sleeping sickness concentrations in the 1940s, health policy was once again considered the vanguard of overall welfarist policies and provided a welcome legitimization for the government to intervene into the social fabric of rural populations in an authoritarian manner. In the first years of the new decade, Tanzanian statism was enhanced, for which two parallel political processes were accountable. Firstly, in 1972 Nyerere announced a government reform that aimed at shifting centralized decision powers to the regions and the districts. As he noted: "[...] it has gradually become obvious that, in order to make a reality of our policies of socialism and self-reliance, the planning and control of development in this country must be exercised at local level to a much greater extent than at present. Our nation is too large for the people at the centre in Dar es Salaam always to understand local problems or to sense their urgency."⁷ Contrary to what political rhetoric might have implied, the policy of decentralization led to a dismantling of local development initiatives and a

4 Ruth Sidel, Victor W. Sidel, *The Health of China. Current Conflicts in Medical and Human Services for One Billion People*, Boston 1982, pp. 35–70, S. M. Hillier, *Preventive Health Work in the People's Republic of China, 1949–1982*, in: Hillier and J. A. Jewell (eds.), *Health Care and Traditional Medicine in China, 1800–1982*, London 1983, pp. 149–217.

5 MOH/Library, *Budget Speech by the Minister for Health and Social Welfare, L. Nangwanda Sijaona*, MP, 1970/1971, *Estimates*, pp. 1–61, here: pp. 24–25.

6 Bruchhausen, *Medizin zwischen den Welten*, p. 129.

7 Nyerere, *Decentralization*, Dar es Salaam, 1972, pp. 1–12, here: p. 1.

strengthening of the party within the dual and hierarchically structured system of political representation, ranging from the village to the district and regional levels.⁸ Secondly, and parallel to the increasing bureaucratization of development policies, was the more rigid policy of villagization that left its traces in the memories of the rural population. In 1973, Nyerere stated that “*living in villages has become an order*” and embarked on a more comprehensive villagization program in the course of which over 5 million Tanzanians were resettled until 1976.⁹ Given the excesses of an authoritarian but albeit weak state being more and more unable to calibrate the rhetoric of self-reliance in the peripheries with the reality of concentration of power in the centre, it is interesting to note that Nyerere’s turn to socialist rural policies did not dampen his reputation in the West.¹⁰ After the wave of nationalization of banks and foreign companies in Tanzania, in 1967 Geigy silenced all those voices in Switzerland who always knew what a socialist regime was all about:

*“The Tanzanian authorities admit that [the nationalizations] were perhaps somewhat too brusque an act of force and that president Nyerere – who is himself very aware of this – is prone to such quick and emotional decisions but that these measures had to be implemented sooner or later. They are nevertheless a far cry from what leftist governments in Europe (Labour in England for instance) understand by the notion of “nationalization”, where whole business sectors are affected by the process, while in Tanzania only a few foreign companies are affected. Generally, they assured me that there is no communist pressure guiding the decision [...]”*¹¹

The widespread regard for Nyerere’s modesty and his credibility did not mean, however, that in the long run these rural development policies and the ideology of “*ujamaa vijijini*” would not alter the relationship between the foreign NGO’s and the Tanzanian state. As some scholars have argued, one of the major characteristics of this relationship was that foreign NGO’s working in rural areas more or less totally embraced Nyerere’s ideologies of rural development. In extension of Saul’s and Cliffe’s concept of the “*development front*”, historian Michael Jennings, writing about the history of the British charity OXFAM in Tanzania, introduced the term “*surrogates of the state*” in order to hint at the NGO’s compliance

8 Eckert, *Herrschen und Verwalten*, p. 244.

9 Ibid., p. 253, Leander Schneider, *Freedom and Unfreedom in Rural Development. Julius Nyerere, Ujamaa Vijijini, and Villagization*, in: *Canadian Journal of African Studies*, Vol. 38, No. 2, 2004, pp. 344–393.

10 Susan C. Crouch, *Western Responses*.

11 (ASTI), *Ifakara I, BSFEL u.a. Rudolf Geigy, Vorschläge betreffend die zukünftige Gestaltung der Tätigkeit des Rural Aid Centres in Ifakara, 1967*, pp. 1–6, here: p. 1.

with Tanzanian government policies in the 1970s.¹² This line of reasoning is important because similar tendencies of a strong alignment with Tanzanian policy guidelines can also be detected in the Swiss case. Thus, looked at historically, the ideologies of COLD WAR were not a homogenous principle that determined the practices of historical actors on the ground. Rather, these actors could or could not exploit these ideologies according to their changing interests. As it will be shown in the following, while science and technology in the 1960s was a promise of modernity, rationality and an instrument of subordination, one decade later this powerful edifice began to falter. Swiss development work was exposed to pressure from various sites and drawn into the micro-politics of negotiations and adaptations to a new political environment.

DISMANTLING THE RURAL AID CENTRE – ON THE ROAD TO PREVENTIVE MEDICINE

The new political constituencies laid out in 1967 and the rising importance of health within socialist ideology had strong repercussions on the content of the training offered by the RAC at Ifakara. Towards the end of the decade, the RAC continually changed its status from being a foreign donation that demanded African gratefulness to an institution that created a sense of ownership and a strong desire to frame its outcomes according to its own needs. One of the logical consequences of the integration of the school within the faculty of medicine in Dar es Salaam was that more and more faculty members tried to exert their influence over the RAC and to adjust its overall policy more to the perceived needs of the country. Prominent among these was malariologist Wenceslaus Kilama, who would become the first director of the NATIONAL INSTITUTE OF MEDICAL RESEARCH (NIMR) in 1979. *“If the Ifakara course is to contribute fully to the development of our students,”* Kilama expressed his conviction, *“an integrated programme should be planned and carried out by the members of this faculty. Participation by the Swiss group should be encouraged, but the primary leadership must stem from the Faculty.”*¹³ Adding to the issue of which party should have a stronger say in the overall policy of the RAC was Tanzania’s intention to create a new chair of parasitology in Dar es Salaam – which would render the teaching at the RAC obsolete – as well as the more general impression that the RAC’s strong bias towards biology did not keep pace with

12 Jennings, *Surrogates of the State. Oxfam and Development in Tanzania, 1961–1979*, London 1998.

13 (ASTI), Ifakara I, BSFEL u.a, Wen Kilama, *Some Background Information about the Ifakara Programme*, 05.1971, p.2.

the changing trend towards social aspects in health care.¹⁴ After a discussion between the two parties in 1970 it was concluded that more time should be invested in conducting health surveys and disease control, to the detriment of teaching parasitological topics.¹⁵ However, the conflict about adjusting the RAC was never just waged between the STI and the members of the medical faculty in Dar nor was it just about its future role within the Tanzanian health system. In the 1970s, the Swiss teaching staff were confronted with a new generation of politically active students for whom the value of knowledge derived from its quality to improve society. Theirs was the wish to “*enter more fully into the community [...] and to give service to the community in a number of ways.*”¹⁶ The students’ criticism was not just aimed at the underlying concepts of health and disease upon which the RAC was built, but touched upon the politics of daily life. On one occasion several of them complained about the low wages paid to the so-called “*flyboys*” employed to catch tsetse flies and other disease vectors for research purposes. The issue turned into several heated debates about the degree of “*exploitation*” of subaltern staff between the Swiss teachers and the African employees but could finally be settled peacefully. Freyvogel, the chronicler of these incidences, interpreted them in the light of an awakened social consciousness among the Africans. As he comments:

*“It is a sign of increasing social awareness, perhaps because of the activities of Mwalimu Nyerere, and that we, who know the country and its inhabitants comparatively well, also have to adjust our attitude and behavior every year. It was interesting to see that in the discussions there was an African and European front opposing each other, even though normally the contact between Swiss and Africans is free from hostilities.”*¹⁷

Adjusting one’s own attitudes to the new circumstances basically implied juggling with a term that could embrace different meanings for various historical players and that had the advantage of being applied strategically: “*Africanization.*” Not surprisingly, given the political and social pressures exerted on a scientific paradigm that so far was unable to bridge the divide between disease etiology and societal aspects of health care, the Swiss scientists and philanthropists mused about the future of their commitment in Tanzania. As

14 (ATAF), *Lettres d’Ifakara (1959–1985)*, Thierry Freyvogel, 31.07.1969, pp. 1–3, here: p. 2.

15 (ASTI), *Unterlagen Antoine Degrémont, RAC, Medical Students’ Course 1971, Organisations*, Thierry Freyvogel, *Medical Students’ Course 1971, Working Paper*, 29.08.1970, pp. 1–3, here: p. 1.

16 (ASTI), *Ifakara I, BSFEL u.a, H. Gosling, Some Suggestions Regarding the Course at Ifakara*, 01.1971, pp. 1–2, here: p. 1.

17 (ATAF), *Lettres d’Ifakara (1959–1985)*, Thierry Freyvogel, 26.07.1970, pp. 1–3, here: p. 2.

a historical category, Africanization was seen as a reality that caused ambivalent reactions. Listening to the various discussions in the offices of the STI or J. R. GEIGY AG, “*Africanization*” was considered as a historical process not alien to a natural force taking its toll and not leaving much chance for escape. Although it was impossible to stem the tide, it was nevertheless worth trying to be always one step ahead of the future and to design strategies in order to channel the process and “*avoid precipitous and crude action.*”¹⁸

Africanization antagonized the Swiss protagonists. Victor Umbricht, especially – a member of the governing board of CIBA-GEIGY AG – and Rudolf Geigy diverged considerably in their opinion of what “*Africanization*” might consist. While Umbricht opted for the complete hand-over of the development project to the Tanzanian government, Geigy was said to “*have done nothing to reduce Swiss presence in Ifakara.*”¹⁹ Paradoxically, both men in one way or another expressed their wishes that Switzerland could still continue its research activities in Tanzania and this was more than likely, since, according to them, it would still take a long time for Africans to be independent in research matters.²⁰

THE MEDICAL ASSISTANT’S TRAINING CENTRE (MATC) 1973–1978

The general dissatisfaction with the working of the RAC and the BASLE FOUNDATION’S step-by-step withdrawal from Ifakara were resolved and sealed with the decision to transform the RAC into a MEDICAL ASSISTANT TRAINING CENTRE (MATC) in 1973. The extension of training schemes for Medical Assistants was a high priority for the MINISTRY OF HEALTH (MOH) in Dar es Salaam. Medical Assistants ranked below medical doctors and Assistant Medical Officers in the hierarchy of health personnel and were to perform preventive as well as curative work in the health centres – since Titmuss the cornerstones of Tanzanian rural health services. In 1972 there were only just over three hundred Medical Assistants employed in government or voluntary agency health services, most of them flocking out of four schools based at Tanga, Mwanza, Bumbuli and Machame.²¹ By 1977 their number had risen to about nine hundred.²² The Swiss and Tanzanian parties convened that the new

18 NOVARTIS Firmenarchiv, CIBA, RE 15.04.1, Viktor Umbricht to Rudolf Geigy, Basler Stiftung zur Förderung von Entwicklungsländern/Ifakara-Projekt, 17.02.1972, pp. 1–3, here: p. 1.

19 (BAR), E2005 (A), 1983/18, 361, t.311-Tansania 5, Rural Medical Aid Centre Ifakara, 1970–1972, Henri-Philippe Cart, Note de dossier. Entretien de M. Umbricht de CIBA-Geigy avec MJ et CP le 9 mars 1972, 14.03.1972, p. 1.

20 NOVARTIS Firmenarchiv, CIBA, RE 15.04.11, Protokolle der Stiftungsratssitzungen 1960–1982, E.Stocker, Protokoll der Sitzung des Stiftungsrats vom 16. Dezember 1970, 10.00 Uhr bei der CIBA-GEIGY AG, pp. 1–7, here: p. 6, Ibid., RE 15.04.11, Umbricht to Geigy, 17.02.1972, pp. 2–3.

21 (MOH)/Library, Budget Speech by the Minister for Health, Hon. A. H. Mwinyi for the Year 1973/74, pp. 1–30, here: pp. 22–23.

22 (BAR), E 2005 (A), 1991/16, 400, t.311.Tansania, Allgemeines, 1976–1978, Speech by the Minister for Health Ndugu Leader Stirling, MP for the Financial Year 1977/78, pp. 18–19.

MATC should be handed over to the Tanzanian government after a period of six years, during which the BASLE FOUNDATION would continuously reduce its support to the project.²³ The new arrangement was not a unilateral imposition. The MOH successfully avoided all decision powers being vested in the hands of the BASLE FOUNDATION and urged for the creation of a board of governors which would assemble an equal number of people from the FOUNDATION and the MINISTRY, “with its chairman appointed by our Ministry of Health.”²⁴

Furthermore the Tanzanian partners vetoed the original budget plans which according to them would have transformed the MATC in Ifakara into an institution far too sophisticated compared to the other medical assistants schools.²⁵ Instead they proposed to invest the spare money into the construction of a new health centre in Mlimba, located some hundred miles southwest of Ifakara and serving as a suitable teaching-outpost for the MATC.²⁶ From an organizational point of view, the new school was a far cry from the former RAC. Instead of short-term courses in biology and disease causation, the MATC offered three-year training courses for 40 students annually, for whom Ifakara would lose the status of a picturesque episode enhancing academic careers of Dar-es-Salaam students but would become the basis for a long-term engagement. The school was placed under the tutelage of ST. FRANCIS HOSPITAL and represented by the Swiss physician Oscar Appert, who acted both as medical superintendent of ST. FRANCIS as well as principal of the MATC.²⁷ While teachers of the STI still found their way to Ifakara to impart their knowledge in tropical parasitology, much of the teaching obligations weighed heavily on the shoulders of the notoriously overburdened Swiss hospital physicians. It might be one of the paradoxes of this new development project, at the heart of which was shifting the pendulum between curative and preventive medicine in favor of the latter, that for ST. FRANCIS the new commitment was fuel for its claim for further increasing the number of Swiss physicians in Ifakara.²⁸

23 The contribution of the BASLE FOUNDATION was CHF 800'000, while the mission society, the TANZANIAN GOVERNMENT and the SWISS GOVERNMENT contributed CHF 200'000, CHF 100'000 and CHF 300'000 respectively, see: NOVARTIS Firmenarchiv, Bestand CIBA, RE 15.04.11, Basler Stiftung zur Förderung von Entwicklungsländern/Beteiligung des Bundes, 06.04.1973, p. 1.

24 Archiv NOVARTIS Stiftung für Nachhaltige Entwicklung (ANSNE), N. B. Akim to Rudolf Geigy, Proposed Extension of Ifakara Rural Aid Centre into a Medical Assistant School, 20.07.1972, p. 1, Members of the Board of Governors were: B. O. Dendego (TANU Morogoro), Dr. Mgeni (Regional Medical Officer, Morogoro), N. B. Akim (Director of the Health Manpower Development Department, MoH), Dr. Valentin Schuppler (St. Francis Hospital) Bishop Iteka (Diocese Mahenge), Prof. Rudolf Geigy (Basle Foundation), see: NOVARTIS Firmenarchiv, CIBA, RE 15.04.11, H. Meyer, Protokoll der Sitzung des Stiftungsrates vom 7. Dezember 1973, 16.00 Uhr, bei der CIBA-GEIGY AG, 07.12.1973, pp. 1–7, here: p. 5.

25 (ANSNE) Basler Stiftung zur Foerderung von Entwicklungsländern (Ifakara), Notiz über die Besprechung von 18. Juli 1972, 18.07.1972, pp. 1.

26 Ibid., Akim to Geigy, 20.07.1972, p. 1.

27 In 1975, the physician Valentin Schuppler became principal of the MATC.

28 (ANSNE), C. A. Steiner, Rapport d'activités 1975–1976, December 1976, pp. 1–8, here: p. 7.

The most important innovation of the new MATC, however, was that it introduced community and public health topics into its curriculum. The students' long-term engagement in Ifakara made it feasible to change the outmoded policy of "*confronting the rural community with the unhygienic conditions they live in*", without attempting to actively work on their improvement.²⁹ In their second year in Ifakara, the MATC students were occasionally sent to selected quarters in Ifakara where they, in a joint effort with the local community, built latrines, wells and trickled down their acquired knowledge on adequate nutrition, hygiene and the prevention of communicable diseases.³⁰ This "*community work*" was in close alignment with the official Tanzanian health policy. In 1972, the country embarked on a new health campaign that diffused health messages through various media to distant households under the heading "*Mtu ni Afya*" ("*Man is health*").

Tanzanians had known health campaigns before. What was new about "*Mtu ni Afya*", however, was that the population was not just considered as the recipients of various health messages but that they were organized in several groups and asked to contribute actively to the improvement of their health status. "*This time, each group was to build some sort of health monument, some physical evidence of environmental change resulting directly from the campaign.*"³¹ As Budd Hall contended, clearing the vegetation around houses as well as building new latrines were the two favorite activities, leaving far behind other interventions such as "*boiling water*" or "*avoiding group use of drinking containers and cigarettes.*"³² Caught by the promises of community health, the STI for the first time since the era of Thierry Freyvogel and Fritz Haerdi delegated a biologist to Ifakara who signed a long-term contract and who arrived on the spot in the person of Gerhard Eichenberger. The former Ph.D. student of Rudolf Geigy faced a double task which was not easy to reconcile: on the one hand, he was expected to revitalize the field laboratory and thus give a push to scientific research in the tropics. On the other hand, he was asked to deepen the paths of social medicine and community health which the Tanzanian state had pre-determined. Eichenberger was always inclined towards the latter. Apart from teaching at the MATC, large amounts of his time were consumed by the preparation and execution of a public health project which aimed to "*sanitize*" a specific quarter of Ifakara and to render its inhabitants sensitive to the health education given by the MATC students. The public health efforts the project entailed were not just delivered in the form of immaterial health information, adherence to which was always weighed against the privations of daily life, but took on a concrete shape. Eichenberger encouraged

29 (ASTI), Korrespondenz Appert, Eichenberger, Schuppler, Ifakara, Thierry Freyvogel to Gerhard Eichenberger, 31.10.1973, p.1.

30 (ASTI), Courses 1966–1971, Oscar Appert, 1972, pp.1–3, here: pp.2–3.

31 Budd L.Hall, *Mtu ni Afya – Man is Health. Tanzania's Health Campaign*, Washington 1978, p.45.

32 *Ibid.*, p.46.



Latrine construction, Ifakara, 1974–1976, “method Eichenberger”, source: SWISS TROPICAL AND PUBLIC HEALTH INSTITUTE (SWISS TPH)

the construction of several pit latrines and with the help of the mission and the patients from the leprosy asylum, several top covers made of concrete were produced and traded locally. The population did however not embrace the idea of establishing latrines wholeheartedly. *“The problem of development work,”* Eichenberger recapitulated, *“is that you never know what you induce and you never know in what it will result. The success or failure of development projects can just be assessed retrospectively.”*³³ Yet, Eichenberger’s public health campaign was never subject to evaluation nor was it continued after he left Ifakara in 1976.

What the cautious beginnings of public health – albeit without a scientific component – shows was a close alignment of Swiss scientists and physicians with the Tanzanian health policy and a co-production of health and socialist superstructure. The argument that socialist ideologies and health were mutually reinforcing is drawn from the fact that health was de-individualized. Community health in the 1970s was distinct from public health efforts in colonial times, in that the promotion of hygiene – nicely captured in the fetish of the latrine – did not emerge out of the fear of Western experts with *“disease dealing natives.”*³⁴ The strategy employed was not to isolate the already sick but to spur behavior change of those not yet affected for the benefit of a wider population. As Eichenberger recalled,

33 Interview with Eichenberger, 31.10.2008.

34 Warwick Anderson, *Colonial Pathologies. American Tropical Medicine, Race, and Hygiene in the Philippines*, Durham, London 2006, p. 87.

the message delivered to the community in the 1970s was that general cleanliness and hygiene rendered service to the larger community, as did the establishment of latrines that would reduce hookworm infection and thus contribute to the wellbeing of society at large.³⁵ Turned the other way round, individual defiance from these principles would have been interpreted as a threat to other community members and a blow to the concept of biomedical citizenship.³⁶

Policy entered the MATC at other venues too. In 1975 most of the country's school principals followed a call from the MOH and gathered in Kibaha, where they received the information that as a self-reliance strategy all schools would have to cover 25% of their running costs through farming and animal husbandry.³⁷ Even worse, within a period of four years the government reserved the right to withdraw their funds to the medical assistants schools completely. In order to increase their own contribution to the training efforts, the MATC in Ifakara was allotted an area of one hectare where the students regularly planted and harvested maize, onions and rice.³⁸ Despite the increasing demands addressed to the medical schools, Oscar Appert was in full support of the official policy. "*The MATC complies fully with the official health policies and I want to add that I still agree with them in principle.*"³⁹ Thus, it would be misleading to interpret the MATC as a mere bulwark of Western biomedicine in Africa. Rather, it became a powerful instrument for the Tanzanian government, with the help of which the seeds of socialist policies could be planted in the rural areas during the heights of its resettlement policies. The Swiss researchers and physicians displayed a partial view on the contents and effects of these policies. While distilling the idealistic aspects of "*equality*" and "*prevention of exploitation*", they tended to fade out the increasing violence of resettlement that swept over the rural countryside. While the interpretation of a "*biomedicalization*" of the African countryside through Western NGO's in the 1970s does not hold out against historical scrutiny, the stealthy process of a "*Tanzanization*" of development circles back in Switzerland seems to be a more fruitful path to follow. As can be argued, the practical experiences of several Swiss development workers in Tanzania strongly contributed to the re-emergence of social medicine in Switzerland.

35 Interview mit Gerhard Eichenberger, 31.10.2008.

36 Nikolas Rose, Carlos Novas, Biological Citizenship, in: Aihwa Ong and Stephen J. Collier (eds.), *Global Assemblages. Technology, Politics, and Ethics as Anthropological Problems*, Malden 2008, pp. 439–463.

37 (ANSNE), Oscar Appert, 28.11.1975, pp. 1–3, here: p. 2.

38 *Ibid.*, p. 2.

39 (ASTI), *Courses 1966–1971*, Oscar Appert [undated], pp. 1–3, here: p. 3.

THE RISE OF SOCIAL MEDICINE IN SWITZERLAND

The shift of negotiation power between Tanzanian and Swiss players in the 1970s, as far as Swiss-initiated development projects were concerned, as well as the Swiss researchers' strong alignment with Tanzanian development policy, is just one side of the coin. Its flipside buttresses the argument that the re-ascent of social medicine back in Switzerland is closely tied to the experiences made in Tanzania. From the 1970s onwards, new non-governmental actors entered the public health scene in Switzerland who were able to place health on the high echelons of the Swiss government's development agenda. Worth mentioning in this regard is *MEDICUS MUNDI SCHWEIZ* (MMS) the Swiss branch of *MEDICUS MUNDI INTERNATIONAL* that was founded in 1973. MMS is an umbrella organization that comprises different development organizations in order to better coordinate the various and heterogeneous development efforts. More specifically, MMS became active in the field of recruiting and preparing possible candidates ready to dedicate part of their medical careers in a Third World country.⁴⁰ MMS was presided over by Edgar Widmer, a physician and Edgar Maranta's nephew, who knew the Tanzanian health sector by heart from his work at *ST. FRANCIS HOSPITAL* in Ifakara – an experience Widmer shared with several other members of MMS.⁴¹ Despite its focus on the medical system of developing countries and the delegation of physicians whose impact was in most cases restricted by the boundaries of hospitals, MMS was important in diffusing a new concept of health and unpacking conventional development strategies. At the 1975 conference convened at Rüslikon (Zurich), the various MMS working groups urged that the *“new target has to be primary health care for all; that means focusing on comprehensive medicine which conceptualizes human beings within their specific cultural and socio-economic environments and which is geared towards preventive measures for the healthy instead of only curative actions for the ill.”*⁴²

It was decided right from the beginning that the secretariat of MMS should be placed under the auspices of the STI and put into the hands of STI staff Antoine Degrémont. The later director of the STI held a medical degree and was one of prime motors accounting for a change within the STI that he himself described as one from biology to more public health

40 ARCHIV *MEDICUS MUNDI SCHWEIZ* (AMMS), DEH, Documents base, 1967–1981, Edgar Widmer to Thomas Raeber, 21.06.1972, pp. 1–2, here: p. 1.

41 Widmer published a dissertation in the field of medical history, see: Edgar Widmer, *Zur Geschichte der schweizerischen ärztlichen Mission in Afrika unter besonderer Berücksichtigung des medizinischen Zentrums von Ifakara, Tanganyika*, Basel 1963.

42 (BAR), E 2005 (A), 1985/101, 11, t.024.04, Arbeitsgruppe Bevölkerungsprobleme und medizinische Entwicklungszusammenarbeit, Karl Appert, Neues Konzept für internationale medizinische Entwicklungshilfe, in: *Pressedienst der Schweizer Ärzte-Information*, 26.05.1975, p. 1.

oriented approaches.⁴³ The major event in this shift towards the accentuation of public health in dealing with African ailments was the stepping back of Rudolf Geigy as director of the STI, his replacement through Thierry Freyvogel in 1972 and the coming to the fore of a new group of politically perceptive individuals at the STI. Like Geigy before, this new generation of development-inspired medics and biologists were extremely powerful in influencing the DFTZ in their development strategies. A prime example for the argument that the new orientations in international health did not emerge out of the centers of Swiss development aid but grew slowly from their edges is the “*Working Group Health*”, a consultative organ convened in 1974 in order to assist the DFTZ in their medical development aspirations.

THE WORKING GROUP HEALTH (WGH)

In 1974, Antoine Degrémont and Thierry Freyvogel joined the WGH which brought together a group of scientists and physicians as well as government actors, most of whom had working experience in Tanzania.⁴⁴ The group was assigned to advise the DFTZ in its overall health policy which should be more tailored to the needs of the developing countries and to work out terms of reference, with the help of which new project proposals could be assessed.⁴⁵ The new developments in the Tanzanian health sector that fed back to the DFTZ were vital in framing new policies. But what made the lessons drawn from the Tanzanian socialist health interventions so attractive for Swiss development planners? The answers to this question are multi-dimensional and have to be seen in the context of Switzerland’s history with other countries’ health sectors so far. First and foremost, Tanzania provided a showcase for a developing country that tested homegrown solutions for its health problems, while displaying a rhetoric of “*self-reliance*” and “*equity*” in the health sector that matched perfectly with the new development discourses in Switzerland at the turn of the new decade. The many development efforts of the 1960s, inspired by modernization theory and fancying large-scale technological fixes, and whose failures became evident after ten years of slow decay, unleashed new ways of conceptualizing development work. This

43 (ASTI), Antoine Degrémont, Jean-Pierre Gontard, *Aperçu global de la coopération Suisse au développement dans le domaine de la santé* [typescript 1994], Jean-Pierre Gontard publicly voted for interpreting the year 1973 as a change of mind within Swiss medical aid circles, see: Gontard, *Aperçu global de la coopération Suisse au développement dans le domaine de la santé, 1960–1993*, in: *Jahrbuch Schweiz-Dritte Welt*, 1994, pp.169–184.

44 Apart from Thierry Freyvogel and Antoine Degrémont this is especially true for Noa Zanolli (SDC), Jacques Rüttner (University of Zurich), Per Schellenberg (MMS), and Klaus Gyr (University of Basel).

45 Noa Zanolli, *Aus der Praxis lernen. Über die Aufgaben der Arbeitsgruppe Gesundheit*, in: *Antenne*, Vol. 2, 1976, pp.5–6.

can be described as a turn away from the simplistic picture of a division of labor between the West providing technical solutions and the “*underdeveloped*” country being receptive to all the West’s blessings in order to “*catch up*” on the march towards modernity. Instead, the new discourse reflected the West’s own role in the fabrication of global inequalities, without being able, however, to escape the discursive dichotomies of “*developed*” – “*underdeveloped*,” “*traditional*” – “*modern*,” “*industrial and scientific progress*” – “*stagnation*” and so forth.⁴⁶

Secondly, the DFTZ’s embracement of Tanzania’s de-medicalized and cheap health care for the rural masses and the close connection between development and health has to be interpreted not just against the backdrop of a general unease with the course of Swiss development so far and political pressure exerted on the official organs of Swiss development aid, but against the recent experiences of the DFTZ in improving Third World health. An important point of departure was the Swiss government’s CHF 5 million grant to the massive DUKE OF HARRAR HOSPITAL in Addis Abeba (Ethiopia). The project, led by the University of Bern, witnessed the untimely retreat of the Swiss partners in 1974/75 because of the decision by the military regime in Addis to shift their attention to rural health care, to the detriment of urban development planning.⁴⁷ The Tanzanian example of being the sorcerer’s apprentice in their own development laboratory, a shifting development course in Switzerland and, at an international level (discussed below), a range of historical experiences that resonated into the present, was thus the trilogy responsible for a new health concept entering the DFTZ at the beginning of the 1970s.

The first conceptual papers drafted by the working group health are vital proof of the attempt to de-medicalize health care and to establish a relation between health and development, as in the story of the chicken and the egg.⁴⁸ As was written in the first basic paper of the WGH: “*Development aid in the realm of medicine has to be seen in the context of the socio-economic conditions of the developing countries in general and in that of the targeted country or*

46 Manuel Schär, *Wie entwickeln wir die “Dritte Welt”? Kontinuitäten und Brüche im Entwicklungsverständnis um 1968 in der Schweiz*, in: Janick Marina Schaufelbuehl (ed.), 1968–1978. Ein bewegtes Jahrzehnt in der Schweiz. Unter Mitarbeit von Nuno Pereira und Renate Schär, Zürich 2009, pp. 99–111, here: p. 108.

47 Noa Zanolli, *Gesundheitliche Entwicklungszusammenarbeit des Bundes. Anfänge, Erfahrungen und die Projekte heute*, in: *Sozial und Präventivmedizin*, Vol. 24, 1979, pp. 192–194, here: p. 192, (BAR), E 2005 (A), 1985/101, 688, t. 751–339, *Medicus Mundi* Basel, 1973–1975, Per Schellenberg, in: *Bulletin Medicus Mundi Schweiz*, Vol. 2, 1975, pp. 1–8, here: p. 4.

48 As Rolf Wilhelm wrote: “*Wenn auf diese Weise die Gesundheit der grossen Massen der armen Bevölkerung der Entwicklungsländer wesentlich verbessert werden kann, so ist auch ein wichtiges Ziel der Entwicklungszusammenarbeit erfüllt: ein entscheidendes menschliches Grundbedürfnis wird befriedigt. Dies wirkt sich dann wiederum auf die andern Bereiche des menschlichen Lebens aus. Man weiss: Gesunde Menschen können besser arbeiten. Sie haben aber auch eine andere Einstellung zu den Problemen der eigenen Zukunft. Und sie sind erst so in der Lage, wirklich sich selbst zu helfen*”, see: Wilhelm, *Auch die Gesundheit gehört zur Entwicklungsarbeit* in: *Antenne*, Vol. 2, 1976, pp. 1–2, here: p. 2.

region in particular.”⁴⁹ Despite all assertions, the new discourse of health and development with its emphasis on equal access to health care (“creation of basic health care services”), preventive medicine instead of curative services and the focus on specific “risk groups” (“medicine in development countries is to a large extent pediatrics, especially in a prophylactic manner”⁵⁰) was slow to establish itself and was not free of contradictions and several inconsistencies.

One of the insecurities among the members of the WGH was whether or not the ideal of disease prevention could successfully be applied in Third World countries. As it was felt, one of the major obstacles of prevention was the fact that its success could not be measured and counted as easily as the numbers of surgical interventions or the patients waiting in the hospitals’ outpatient departments. The success of prevention was the hazy success of the future:

*“Although a major priority in principle, preventive medicine faces major constraints in Third World contexts. The time span in which the successes of preventive medicine become evident plays the most important role. During this period, which can stretch over two generations, curative medicine will be crucial as a precursor of preventive concepts.”*⁵¹

It has therefore been concluded that a) preventive medicine should be integrated into the existing system of curative services, b) preventive medicine had the potential to trigger new curative health services and c) it was the curative medicine that provided the mutual trust necessary for the launching of preventive measures.⁵²

The insecurity about the basic tenets of Switzerland’s new approach towards Third World health was not just discourse-innate but corresponded to daily practice. This is, however, not to say that the WGH was reluctant to prevent certain projects from being executed. In 1975 for instance, Degrémont and Freyvogel turned down a project that focused on the improvement of cardio-vascular surgery in Senegal, on the grounds that such an undertaking did not correspond with the basic axioms of Swiss medical aid.⁵³ Such insular events should, however, not hide the fact that the lion’s share of the approved funds was provided

49 (ASTI), DEH/DDA, Arbeitsgruppe Gesundheit, Diskussionsgrundlage Medizinische Entwicklungszusammenarbeit: Grundlagen, Ziele und Mittel, 28.08.1974, p. 1.

50 (BAR), E 2005 (A), 1985/101, 11, Franz Perabo, Zusammenfassung der Besprechung über Medizinische Entwicklungshilfe, 20.09.1974, p. 1.

51 (ASTI), DEH/DDA, Arbeitsgruppe Gesundheit, Medizinische Entwicklungszusammenarbeit: Grundlagen, Ziele und Mittel, 3. Fassung, 29.10.1974, p. 4.

52 Ibid.

53 (BAR), E 2005 (A), 1985/101, 11, Thierry Freyvogel, Antoine Degrémont to Rolf Wilhelm, 05.09.1975, pp. 1–2, here: p. 2.

to multilateral cooperation and mainly dispersed for vertical and highly technical health interventions focusing on single specific diseases. One prime example for this nature of solidarity could be the large-scale multilateral project to contain onchocerciasis “*Onchocerciasis Control Project*” (OCP) in West Africa which was initiated by then WORLD BANK president Robert McNamara and launched in 1973.⁵⁴ Switzerland’s contribution to the OCP surpassed by large any other investments directed to the health sector in developing countries at the time.⁵⁵

The loose concepts floating around during the 1970s about which strategies to apply for developing countries or about whether or not prevention was a subtle enough approach for culturally distinct areas of the globe were enhanced and codified on a international level by the conference of Alma Ata, which became the very symbol of such efforts.

THE REVOLUTION DEVOURS ITS CHILDREN:

ALMA ATA, PRIMARY HEALTH CARE AND THE “COUNTER REVOLUTION”

At the international level, the conference of Alma Ata in 1978 was crucial in leveraging and homogenizing a health discourse in Switzerland, the individual ingredients of which were only loosely fitting together during the first years of the 1970s. Not least informed by the experiences of Tanzania, at Alma Ata WHO adopted a new approach towards health and the provision of health care. Instead of short-term interventions against certain diseases that characterized earlier WHO-approaches, the declaration of PRIMARY HEALTH CARE (PHC) and director-general Halfdan Mahler’s slogan of “*Health for All by the Year 2000*” opted for an inter-sectoral and multi-faceted approach towards health. The strategy of PHC emphasized the use of “*appropriate technology*”, “*community participation*” and the importance of health as a tool for socio-economic development.⁵⁶ The declaration adopted at Alma Ata reflects personal constellations and diverging opinions within the WHO, as well as broader political changes on a global scale.⁵⁷ Especially the People’s Republic of China and the Soviet Union had a strong say in WHO embracing the new ideology of PHC. While China provided the

54 Freyvogel, Flussblindheit und ihre Bekämpfung in Westafrika, in: Bulletin Medicus Mundi Schweiz, Vol. 49/50, 1992, pp. 37–45, here: p. 37.

55 SDC-employee Peter Wiesmann talked about a sum ranging between CHF 12–24 million in a period of six years, see: (ASTI), DEH/DDA, Arbeitsgruppe Gesundheit, Dokumente allgemein, II, 1979/80, Peter Wiesmann, Bundesbeitrag an den Fonds zur Bekämpfung der Onchozerkose in Westafrika (OMS-Programm), 15.05.1979, pp. 1–9, here: p. 1. Between 1980 and 1992, Thierry Freyvogel was member of the OCP’s “*Expert Advisory Committee*” (five years among which as its president).

56 Brown, Cueto, Fee, The World Health Organization, p. 67.

57 For a detailed history written from a WHO-perspective see: Socrates Litsios, The Long and Difficult Road to Alma-Ata. A Personal Reflection, in: International Journal of Health Services, Vol. 32, 2002, pp. 709–732, Marcos Cueto, The Origins of Primary Health Care and Selective Primary Health Care, in: American Journal of Public Health, Vol. 94, No. 11, 2004, pp. 1864–1874.

blueprint through its model of “barefoot doctors”, it was “the Soviets that led WHO to create a new rhetoric at Alma Ata, which eschewed the former goal of diffusing Western techniques around the world in favour of a strident, politicised advocacy of primary health care.”⁵⁸ Theoretically – and largely forgotten today – Alma Ata and PHC was not just a strategy geared towards cheap health care for the rural masses in Third World countries but also a standard for public health services of wealthy industrial nations. Ulrich Frey, director of the FEDERAL PUBLIC HEALTH DEPARTMENT (Today: FEDERAL OFFICE OF PUBLIC HEALTH) and head of the Swiss Alma Ata delegation in 1978 reasoned about the applicability of PHC ideology for Switzerland as well. In his report, Switzerland shared many characteristics with developing countries. Indeed, the Swiss public health system is highly specialized and “medically oriented” and there are still large disparities and supply gaps between the urban centers and the underserved mountainous regions.⁵⁹

According to Frey, the PHC recommendations concerning the integration of PHC within a national health system, the link between health and other sectors (agronomy, education, public services, nutrition) and a systematic health education are especially worth considering and he proposed to establish an ad hoc working group that would more seriously reflect upon the application of the PHC concept for Switzerland.⁶⁰ A new federal “preventive law” that was worked out under Frey’s leadership, however, failed in the political process of consultation in 1982. Especially the cantons – traditionally the main actors in a federal Swiss health system – did not agree to shift their decision-making power in health care to the central government. Resistance came also from the trade associations who argued that in a society held together by liberal principles, prevention was the role of rational individuals and not of intrusive states.⁶¹ Thus, prevention and PHC in its comprehensive view did not have much of a chance, neither in Switzerland nor in international arenas. The major conclusion drawn from the Bellagio Conference organized by the ROCKEFELLER FOUNDATION one year after the seminal meeting in Alma Ata was that the comprehensive PHC model and the goal of “health for all by the year 2000” was too idealistic and too unspecific from a methodological point of view to be successful on the ground. Intellectually, the conference was fed on a paper written by Julia Walsh and Kenneth Warren (director of health science at the ROCKEFELLER FOUNDATION), who proposed “selective PHC” as an interim and

58 Lee Sung, WHO and the Developing World. The Contest for Ideology, in: Andrew Cunningham and Bridie Andrews (eds.), *Western Medicine as Contested Knowledge*, Manchester 1997, pp. 24–45, here: p. 33.

59 (ASTI), DEH/DDA, Arbeitsgruppe Gesundheit, Ulrich Frey, Bericht über die internationale Konferenz über primäre Gesundheitsversorgung (Soins de santé primaires) Alma Ata (USSR) 6.–12. September 1978, pp. 1–25, here: p. 21.

60 Ibid., p. 25.

61 (BAR), E 6100 (C), 1998/106, 1, 660.6, Antrag auf Einsetzung einer nichtständigen Expertenkommission zur Erarbeitung von Grundlagen für ein BG über Krankheitsvorbeugung, Auswertung der Vernehmlassung zum Präventivbericht, pp. 1–16.

more cost-effective strategy for Third World health.⁶² Selective PHC rated certain diseases over others according to their prevalence, the damage they cause in terms of morbidity and mortality as well as the feasibility, effectiveness and the cost of intervention.⁶³ While Warren tried to make clear that he considered selective PHC simply as a realistic approach within the wider PHC concept, proponents of the comprehensive approach argued that the two concepts are in fact irreconcilable.⁶⁴ In 1982 UNICEF would endorse the streamlined version of PHC and propose a concept known as GOBI-FF and aimed at children and pregnant women.⁶⁵

Despite of this “*counter-revolution*” spearheaded by powerful actors such as UNICEF and the ROCKEFELLER FOUNDATION, the PHC concept in its comprehensive vision served as a catalyst for a re-orientation of Swiss development policy. In the ideological backwater of Alma Ata, the DFTZ in 1979/80 revised once again their strategic documents concerning health development in the Third World.

Compared with earlier drafts, the new documents were unambiguous as far as the new direction of development initiatives were concerned: instead of concentrating on singular efforts, health was comprised in holistic terms and prevention was strongly prioritized over curative medicine.⁶⁶ New strategies to improve deficient health systems ranged from education, to the improvement of sanitation and hygiene, family planning, community involvement, and containing single diseases. Most importantly, applied research was assumed to be an efficient tool in the struggle for health in developing countries.⁶⁷ Not surprisingly given the strong relation between health and development, the authors claimed that actions related to the health sector should be given more weight within the Swiss development agency.⁶⁸

62 Julia Walsh, Kenneth Warren, Selective Primary Health Care. An Interim Strategy for Disease Control in Developing Countries, in: *New England Journal of Medicine*, Vol. 301, 1979, pp. 967–974.

63 Debarbar Banerji, Primary Health Care. Selective or Comprehensive, in: *World Health Forum*, Vol. 5, No. 4, 1984, pp. 312–315, here: p. 312.

64 Susan Rifkin, Gill Walt, Why Health Improves. Defining the Issues Concerning “*Comprehensive Primary Health Care*” and “*Selective Primary Health Care*,” in: *Social Science and Medicine*, Vol. 23, 1986, pp. 559–566, here: p. 560.

65 GOBI-FF is the acronym for: using growth charts to monitor child development; widespread availability of oral rehydration salts; promotion of breast-feeding; immunization of all children against measles, diphtheria, pertussis, tetanus, tuberculosis and poliomyelitis; food supplements for pregnant women and young children and family planning.

66 (ASTI), DEH/DDA, Arbeitsgruppe Gesundheit, Dokumente allgemein, II, CZ, VT, aux membres du Groupe de Travail “*Santé*.” Séance du 09.02. 1979, projet de révision des directives en matière de santé, 30.01. 1979, pp. 1–19, here: p. 14.

67 *Ibid.*, p. 10.

68 *Ibid.*, p. 18.

DECOLONIZING SWISS MEDICAL RESEARCH IN TANZANIA

The new emphasis on issues of health and development was paralleled by institutional changes of Swiss medical aid in Tanzania. As already agreed in 1973, the BASLE FOUNDATION handed over the MATC to the Tanzanian state on April 1st 1978. As a new “*acting principal*”, the MOH appointed Boniface Bembeleza who, as a former teacher, was familiar with the school’s daily business. One of the most pressing questions that arose from the BASLE FOUNDATION’s retreat from development work in Tanzania concerned the future of STI’s scientific activities and the fate of the field laboratory. With the chemical industry turning its back on Tanzania, the major funds for the field laboratory were drying out. On November 26th, 1979, the BASLE FOUNDATION and the STI convened that the field laboratory and the staff houses be donated to the latter institution from which followed that the STI now had to cover the full expenses of its scientific outpost.⁶⁹ This new situation caused by the retreat of one decisive Swiss development actor destabilized the former governance structure operating since the 1960s and initiated a process of “*decolonization*” of Swiss biomedical research in Tanzania that was ambivalent and multi-faceted. Firstly in 1982, the SWISS AGENCY FOR DEVELOPMENT AND COOPERATION (SDC) became the major supporter of STIFL in Tanzania.⁷⁰ This implied that medical research should no longer solely be conducted for the sake of doing research but should reach out into society and comply with a humanitarian goal. Applied research within a PHC context was seen as a vehicle for pushing development ahead, for tackling local priorities and was executed in collaboration with local partners. “*Tanzanian health authorities want to be oriented about what kind of scientific problems are tackled [at the field laboratory] and they insist in having a say in these matters.*”⁷¹ The degree to which Tanzanians have “*a say in these matters*” was, however, defined by the Swiss partners. Scientists from the STI were aware of the role the field laboratory played for the institute in Switzerland and they were not eager to compromise this position. As was stated in 1977:

69 (BAR), E 2025 (A), 1991/168, 812, t.751–014, Schweizerisches Tropeninstitut, Bde I–II, 1979–1981, Schenkungsvertrag zwischen der Basler Stiftung zur Förderung von Entwicklungsländern, in Basel (im folgenden “*Stiftung*” genannt) und dem Schweizerischen Tropeninstitut, in Basel (im folgenden “*Tropeninstitut*” genannt), 26. 11. 1979.

70 The DftZ was called DIRECTION FOR DEVELOPMENT COOPERATION AND HUMANITARIAN AID (DEH) in 1977 and SWISS AGENCY FOR DEVELOPMENT AND COOPERATION (SDC) in 1996.

71 NOVARTIS Firmenarchiv CIBA, RE 15.04.11, H. Meyer, Protokoll der Sitzung des Stiftungsrates vom 16. 12. 1977, bei der CIBA-GEIGY AG, 16. 12. 1977, pp. 1–6, here: p. 3.

*“Seen from a Swiss perspective, STIFL should not be downplayed to a mere service centre for the Tanzanian health authorities but should still be able to work for the Swiss Tropical Institute (which does not exclude a close collaboration with Tanzanian bodies, of course). In the future, the laboratories should also increasingly execute projects and mandates that the Tropical Institute receives from WHO. Thus, the field lab maintains its vital role for the Swiss Tropical Institute.”*⁷²

Secondly, in the 1980s, STIFL did not just enter close relationships with SDC and Tanzanian health authorities but also with a couple of African scientists, who from the 1980s onwards started to apply for jobs at the field laboratory.⁷³ The professional status of these researchers and “*field assistants*” went far beyond that of “*mere*” collectors of specimens or laboratory sweepers. The newly appointed men (and much later women) acted as cultural brokers who found themselves in the delicate position of translating the biomedical messages from the “*technoscientific world*” (David Turnbull) of STIFL to rural village life and back again. However, at the very center of all these changes and developments were ruptures in the epistemic structure of science itself. Basically, what held sway in the 1980s was a new understanding of disease causation. Diseases were no longer conceptualized solely as the final product of pathogens invading human bodies but placed within a complex and inter-related “*system*” linking human bodies, microbes, and socio-economic factors. This is not to say that before the 1980s there prevailed a “*reductionist*” concept of disease etiology but just that in the history of the STIFL only from the 1980s onwards was a more complex pattern of health and disease investigated through systematic and applied field studies. One of the STI scientists expressed this new mode of reasoning most succinctly when he declared:

*“Everyone acknowledges the importance of an integration of all levels in the domain of application: integration within development in general: integration of preventive and curative medicine: integration of the different control mechanisms. It seems logical to us to try the same on the level of applied research which means to consider the biggest number of possible factors contributing to one’s well-being and to study their interrelations.”*⁷⁴

72 Ibid., p. 4.

73 In 1981, STIFL had 9 permanent staff members, ten years later the number rose to 88 full-time staff members, see: Marcel Tanner, Andrew Kitua, Antoine Degrémont, Developing Health Research Capability in Tanzania. From a SWISS TROPICAL INSTITUTE FIELD LABORATORY TO THE IFAKARA CENTRE OF THE TANZANIAN NATIONAL INSTITUTE OF MEDICAL RESEARCH, in: *Acta Tropica*, Vol. 57, 1994, pp. 153–173, here: p. 162.

74 (BAR), E 2200.83 (B), 1999/351, 10, 771.22.18, Schweizerisches Tropeninstitut 1982-1984, anonymized, Développement d’un programme de recherches appliquées au SWISS TROPICAL INSTITUTE FIELD LABORATORY (STIFL) Ifakara, Tanzania, pp. 1–14, here: p. 8.

Thirdly, conceptualizing health and disease as an outcome of the interaction of human behavior, economic structures, epidemiological and environmental conditions put new emphasis on diseases such as schistosomiasis (bilharzia), barely considered before. The disease is caused by the pathogen “*schistosoma*” and transmitted by a snail acting as the intermediary host. Sufferers contract urinary or intestinal schistosomiasis in pools of stagnant water scattered over the rural landscape. The public health experts’ increasing interest in this ailment can be explained by the simple fact that the disease is closely related to the transformative changes which the African countryside was subjected to during the development decade. The co-production of irrigation projects or the improvement of communication networks and the spread of bilharzia has contributed to the disease’s doubtful reputation as a “*disease of development*.”⁷⁵ However STI’s cautious step towards bilharzia research dates back to the 1970s. In 1973, during an informal meeting, then minister of health Leader Stirling explained to Thierry Freyvogel that Swiss researchers were still welcome in Tanzania provided that they put bilharzia at the top of their research agenda.⁷⁶ In 1977, head of the field laboratory Adrian Zumstein started a first investigation on the possible factors contributing to the epidemiology of urinary schistosomiasis in the district.⁷⁷ During the first half of the 1980s, bilharzia remained the focus of STIFL in the area. Apart from the disease’s close association to processes of development and modernization, this persistency had a more mundane reason in the fact that NIMR reserved malaria studies for its own research centers and thus considerably curbed STIFLs research options.⁷⁸

Fourthly, the ambivalence in the process of decolonizing Swiss medical research not only lay in maneuvering the political necessities to more broadly share responsibility over research activities with Tanzanian actors while still exploiting the field site for the STI in Basel. More generally and seen from a local perspective, decolonization entailed multiplication of scientific activity and an intensification of knowledge production within Tanzanian society. This complies with the earlier-made observations of the 1940s and 1950s, that patterns of decolonization are channeled and contained by heated scientific activity. While the former field laboratory was expanded into society at large, one has nonetheless to exercise restraint when interpreting these new modes of knowledge production as the all-

75 Feierman, *Struggles for Control. The Social Roots of Health and Healing in Modern Africa*, in: *African Studies Review*, Vol. 28, No. 2/3, 1985, pp. 73–147, here: p. 96.

76 Interview with Thierry Freyvogel, 01. 12. 2008.

77 Adrian Zumstein, *A Study of Some Factors Influencing the Epidemiology of Urinary Schistosomiasis at Ifakara (Kilombero District, Morogoro Region, Tanzania)*, in: *Acta Tropica*, Vol. 40, No. 3, 1983, pp. 187–204.

78 Interview with Marcel Tanner, 03. 02. 2012.

encompassing deus ex machina that analyzes, catalogues and ventures into the unknown landscapes of foreign bodies, as some “*postcolonial*” theorists would have it. Rather, the translation from the lab to the field opened up spaces of negotiation between scientists and Tanzanian villagers about which disease to put on the research agenda and which path towards development to follow.

THE DEATH OF THE CLINIC

Arriving in Ifakara at that time, one of Marcel Tanner’s foremost preoccupations as director of STIFL was to put STIFL’s scientific activities on a firm footing: part of this collaborative strategy at district level was to close ranks with Dr. Wolfram Moll, medical superintendent of ST. FRANCIS HOSPITAL, the teachers of the MATC and Sarvato Tayari, by then District Medical Officer in charge of Kilombero District. As a result of a joint brainstorming process, the researchers, medics and politicians singled out four different health topics they wanted to investigate in the future. Two of the projects were hospital-based. The physicians of ST. FRANCIS were eager to study the hepatic disorders frequently encountered in their patients, as well as the phenomenon of “*fevers of unexplained origin.*”⁷⁹ The latter, especially, was perceived as an urgent problem because so far, and due to a lack of adequate diagnostic tools, most of the palette of different fevers recorded at ST. FRANCIS were interpreted and treated as malaria cases. This practice probably had an impact on the degree of chloroquine resistance found amongst malaria sufferers – a problem that was already manifest at the beginning of the 1970s and related to the dispensary staff’s “*hopeless faith in injections.*”⁸⁰ The two remaining projects were more inspired by the insights of community medicine. The nutrition rehabilitation project was especially revealing because it demonstrated to the public health experts the limits of medical care and prevention within the confinements of a hospital or a dispensary. What’s the use of coddling up undernourished children at the dispensary or explaining to mothers how to prepare adequate food, when the socio-economic context, with which most of the patients had to cope, prohibited a more balanced diet? “*You simply cannot show how to prepare a chicken at the hospital when there is no money to buy chicken!*” was one of the most convincing conclusions drawn from the

79 (ASTI), Ifakara, 1980–1982 (vor DEH), Marcel Tanner, Priorities for a project on applied field research at the SWISS TROPICAL INSTITUTE FIELD LABORATORY (STIFL) in Ifakara as pointed out by the District Medical Officer and by the responsible physicians of the ST. FRANCIS HOSPITAL and the MEDICAL ASSISTANTS TRAINING CENTRE (MATC), May 1981, pp. 1–2, here: p. 1.

80 (BAR), E 2025 (A), 1993/130, 456, t.311-Tansania.45, Recherches médicales au SWISS TROPICAL INSTITUTE FIELD LAB à Ifakara, Bde. I–II, 1981–1984, anonymized, letter to Rolf Wilhelm (SDC), 23.05.1982, pp. 1–2, here: p. 1.

project.⁸¹ What was necessary was not an approach that alienates the patients from their daily environments and confines them to within dispensary walls, but on the contrary, a sound analysis of the different factors contributing to health and illnesses within rural village life. Not surprisingly, the last of the four projects very ambitiously aimed at scrutinizing the interrelations between “nutrition,” “infection,” “immunity,” and “environment” (NIEE) within rural communities.

Expanding biomedical activities to people’s homes required a new knowledge to clarify the obscurity of everyday life. In the eyes of the Swiss researchers, ST. FRANCIS was not a reliable partner as far as the provision and production of such necessary data was concerned. At least this was the impression of Eric Burnier, a STIFL-paid physician, who happened to assist the hospital staff in their daily duties and for whom “the future of St. Francis was a major concern.”⁸² Reviewing the work of ST. FRANCIS’ seventeen dispensaries in the area, Burnier complained about the lack of adequate statistics, patient histories and working procedures:

“The activities of the 17 dispensaries dependent on St. Francis Hospital are a difficult issue: Dr. Moll did not want to or could not provide me with a single document. I also spent many hours delving into Sister Sarah’s folder where all the papers concerning the dispensaries are kept but without avail. To be honest, all this is completely useless [...] there is nothing that would give you an idea about how these dispensaries functioned. Nothing but short notes written in all possible languages or travel reports where every author proposes different things year after year in his own manner. No statistics about staff, the number of diseases encountered, or birth rates that would be really useful.”⁸³

It is not wished here to make assumptions about the performance of certain dispensaries or even to focus more generally on the history of health delivery services in Kilombero district. This project rests in the hands of others.⁸⁴ However, the point is that with STIFL assuming a stronger role in the field of medicine in Kilombero district, the concepts of “health,” “disease,” and “patients” were imbued with different meaning and acted upon through a set of different practices. Burnier’s insistence on statistics about staff development, the distribution of diseases within society and fertility rates is important because

81 Interview with Marcel Tanner, 30.05.2009.

82 (ASTI), STIFL, Correspondence, 1981–1987, Eric Burnier to Antoine Degrémont, 04.05.1983, pp. 1–5, here: p. 1. Between 1982–1985 Burnier was paid by STI in Basel and later by the NGO SOLIDARMED. In 1988, he returned to Switzerland.

83 Ibid., Eric Burnier to Antoine Degrémont, 01.03.1983, p. 1.

84 Marcel Dreier, Health Care, Welfare, and Development in Rural Africa.

it indicates a shifting of attention from the clinic to the population. In analogy to what Michel Foucault observed for 18th century France, in 20th century Tanzania STIFL tried to push the prevalent model of treating individual bodies in clearly demarcated institutions towards a model that asked about the distribution and prevention of pathologies within larger societal systems. While the former model had the interpretation and the treatment of specific symptoms at its center, the paradigmatic shift prepared by system theory gave rise to new biomedical practices of which operational research was one of the most outstanding offshoots. Operational research has its roots in the pressurized economy of WORLD WAR II, when scientists invented cybernetic and mathematical models to adjust the use of scarce resources to overall political and military objectives.⁸⁵ After the war and especially in the 1960s, operational research was applied to other public and corporate sectors and is usually more generally referred to as the science of decision-making in complex social systems today.⁸⁶ STIFL researchers themselves defined operational research as the “*systematic study, by observation and experiment, of the working of a system with a view to improvement.*”⁸⁷ A good example of acquiring a better understanding of how operational research worked in practice is the above-mentioned NIE project that unraveled the impact of different variables (nutrition-infection-immunity-environment) on the health status of children living in the tiny village of Kikwawila.

PRACTICING SOCIAL MEDICINE ON THE GROUND: THE EXPERIENCES FROM KIKWAWILA

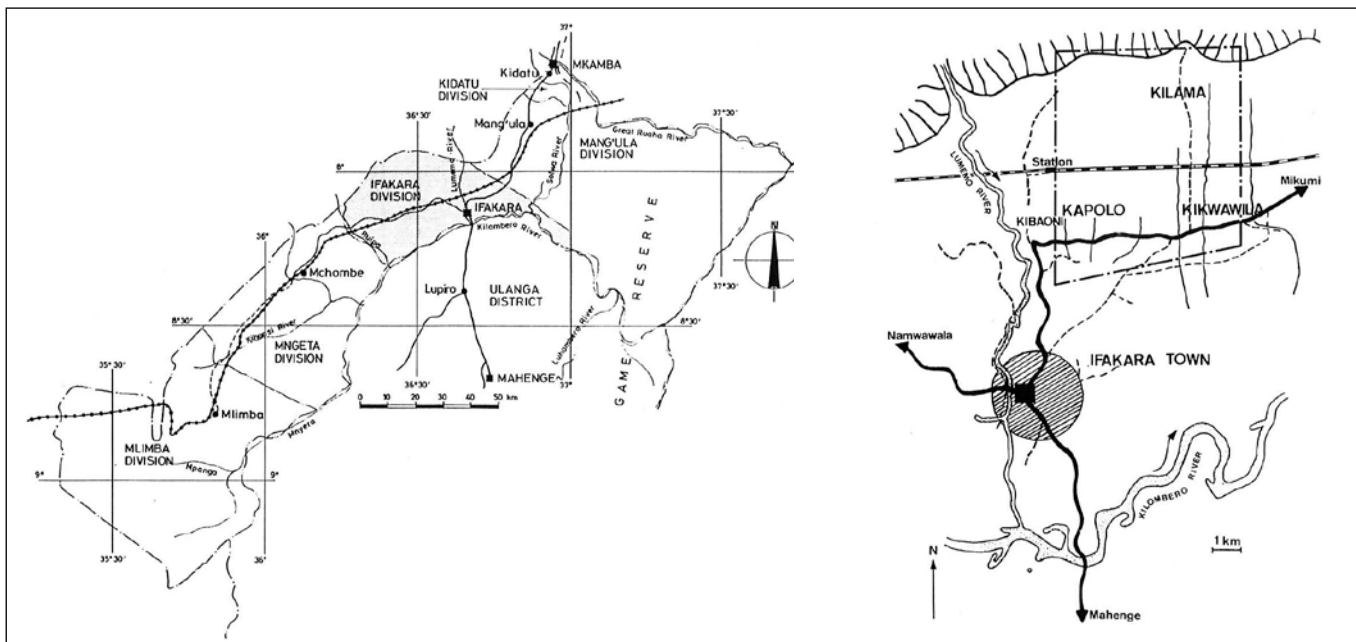
Kikwawila is a small village located some 14km north of Ifakara, composed of different spread-out parts (Kikwawila-Kikwawila, Kikwawila-Kilama, Kikwawila-Kapolo). Unlike the many other villages in the district, Kikwawila did not emerge artificially as the result of Nyerere’s resettlement campaign during the 1970s. It therefore lacked most of the political structures that a “*normal*” ujamaa village was supposed to consist of.⁸⁸ Beyond this absence of firm political structures, the major features that had been carved out for the village were its rural economy based on maize, rice and cassava cultivation, its ethnic heterogeneity as

85 Maurice W. Kirby, *Operational Research in War and Peace. The British Experience from the 1930s to 1970*, London, Birmingham 2003, Robert Lilienfeld, *The Rise of Systems Theory. An Ideological Analysis*, New York, Chichester, Brisbane, Toronto 1978, p. 103.

86 Martin Lengwiler, *Risikopolitik im Sozialstaat. Die schweizerische Unfallversicherung 1870-1970*, Köln 2006, p. 315.

87 (ASTI), STIFL, KIHHERE, Administration 1986, Kilombero Health and Research Programme. Working Paper for the Programme Proposal of Phase II. July 1985–June 1988, November 1984, pp. 1–14, here: p. 4.

88 (ASTI), STIFL, NIE/KIK, Annemarie Schär, Kikwawila – Ein Dorf in Südosttansania. Aspekte der Detribalisierung und Integration, 20. 02. 1985, p. 4.



Kilombero District with Kikwawila-Kikwawila, Kikwawila-Kilama and Kikwawila-Kapolo, source: Acta Tropica, 1987

well as the lack of the most basic health infrastructure. Kikwawila was a suitable place for long-term scientific studies because most of its features were said to be representative for other valley communities too. Scattered over a large area ranging from the Udekwa mountains in the north to the Kilombero river plain in the south, it virtually represented a “cross-section” of the Kilombero valley.⁸⁹ However, what distinguishes Kikwawila from most of the other villages in its vicinity today is the water pipe that provides the villagers with clean water. The pipe dates back to the 1980s and is the result of a joint collaboration between SDC and the Swiss NGO HELVETAS, after years of extensive field research conducted by scientists from STIFL.

The pipe is probably the most apparent material remnant that is directly linked to the research activities of the STI in Kikwawila. Others are more subtle and engrained in the villagers’ memories. Mzee Limo, the former ten-cell leader, for instance still recalls lively the times when “Dr. Tanner” and other researchers from STIFL and ST. FRANCIS HOSPITAL used to

89 Marcel Tanner et al., Longitudinal Study on the Health Status of Children in Kikwawila Village, Tanzania. Study Area and Design, in: Acta Tropica, Vol. 44, 1987, pp. 119–136, here: p. 123.

visit the village on a regular basis. With his finger he directed my gaze to the point where the researchers' table used to stand and he drew the imaginary line of people queuing up to donate their blood and other specimens.⁹⁰ Another moment that I myself remember vividly today is the talk I had with Twaibu Likumi, a STIFL-trained Village Health Worker (VHW) I met during my visit to Kikwawila-Kilama in 2010. After our talk, Likumi took a pen and a small piece of paper on which he wrote the amount of cement, bricks, tubes and other building materials needed to construct a water pipe that would endow his house with running water. He handed the paper over to me with the expectation that once read, "Dr. Tanner" and the scientists from the STI would work towards the fulfillment of his personal desires.⁹¹

In the early 1980s, contacts between villagers and public health specialists became almost a matter of routine. In an attempt to establish a sound "*community diagnosis*" on the back of which "*primary health care (PHC) implementation, selective population chemotherapy, health education, sanitation and schistosomiasis transmission control*" could be evaluated, STIFL sent numerous experts to the village, many with various academic backgrounds.⁹² So for instance, Kikwawila witnessed the arrival of Andreas Zehnder, a tropical agriculturalist, who in collaboration with STIFL and the TANZANIAN FOOD AND NUTRITION CENTER (TFNC) employed a community-based approach to strengthen agricultural production with the ultimate aim of mitigating nutritional problems; Stephan Biro, a Swiss doctoral student, focused on indentifying various anopheles vectors and on the distribution of larvae and adults all over the area and George Lwihula and Reto Suter approached the problem of schistosomiasis transmission from a sociological perspective or tested the impact of local plant molluscicides on the

90 Interview with Mzee Limo, 08.02.2009, I am very grateful to Zachary Likopa for assisting me during the interviews conducted in Kikwawila.

91 Interview with Twaibu Likumi, 04.04.2010.

92 Marcel Tanner, Don De Savigny, Monitoring Community Health Status. Experience from a Case Study in Tanzania, in: Acta Tropica, Vol. 44, 1987, pp.260–270, here: p.262.

disease vectors respectively.⁹³ In 1982 these longitudinal field activities were brought under the umbrella of the SDC-financed “*Kilombero Health and Research Project*” (KIHHERE) which, between 1982 and 1991, went through different stages, combining research on specific diseases (malaria, bilharzia), “*health systems research*” (HSR) and PHC components.⁹⁴ However, the new ways of looking at rural communities, of interrelating disease, nature and culture in an unprecedented manner in order to get rid of STIFL’s stigma as a “*benevolent bush-lab which imposes its own culture onto others*”, is only one side of the coin.⁹⁵ Written on its flipside is the question of how the villagers of Kikwawila received the physical presence of the Western researchers and their messages of preventive health care that cut across conventional understanding of Western biomedicine as prominently symbolized by ST. FRANCIS HOSPITAL in Ifakara. In other words, what forces and strategies shaped the interactions between the members of the biomedical faction and the villagers, when whole segments of populations, whether sick or healthy, came under scientific scrutiny? To approach this question, it would be necessary to engage with the notion of the Greek “*agora*” which was introduced into the history of science literature by Helga Nowotny, Peter Scott and Michael Gibbons.⁹⁶ According to the authors, science today has entered a new stage where the former “*culture of autonomy*” has been replaced by a “*culture of accountability*.” For science to be credible in complex societies, it is no longer enough to provide “*reliable*” knowledge but to generate

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- 93 (ASTI), Korrespondenz Thierry Freyvogel, 1972–1987, Andreas Zehnder et al., Proposal for a Community-Based Approach to Strengthen Agricultural Production and, thus to Contribute to the Control of Nutritional Problems in the Kilombero District, 09.1984, pp. 1–3, Zehnder, Agricultural Production in Kikwawila Village, Southeastern Tanzania, in: *Acta Tropica*, Vol. 44, 1987, pp. 245–260, Marcel Tanner, Zohra Lukmanji, Food Consumption Patterns in a Rural Tanzanian Community (Kikwawila Village, Kilombero District, Morogoro Region) during Lean and Post-Harvest Season, Tanzania Food and Nutrition Centre Report No. 940, 1985, Stephan Biro, Investigations on the Bionomics of Anopheline Vectors in the Ifakara Area (Kilombero District, Tanzania), Inaugural-Dissertation zur Erlangung der Würde eines Doktors der Philosophie vorgelegt der Philosophisch-Naturwissenschaftlichen Fakultät der Universität Basel, Basel 1987, George Lwihula, Human Behaviour and Social Factors Influencing *S. haematobium* transmission in Kikwawila (Kilombero District, Morogoro Region) Tanzania, London 1985, Reto Suter, The Plant Molluscicide *Swartzia madagascariensis* and its Application in Transmission Control Measures Against *Schistosoma haematobium*. Experience from Kikwawila (Kilombero District, Tanzania) Inaugural-Dissertation zur Erlangung der Würde eines Doktors der Philosophie vorgelegt der Philosophisch-Naturwissenschaftlichen Fakultät der Universität Basel, Basel 1986.
- 94 (BAR), E 2025 (A), 1997/200, 642, t.311-Tansania.45, Recherches médicales au SWISS TROPICAL INSTITUTE FIELD LAB à Ifakara, vols. 1–2, 1985-1987, Tansania: Programme de recherches médicales appliquées au laboratoire de terrain de l’Institut Tropical Suisse à Ifakara, pp. 1–14, The arrangement of the KIHHERE-project, with SDC as the funder, STI as a executing agency and STIFL responsible for the operation of KIHHERE on the ground revealed the fragile foundations on which the new development arrangement was built. At each new phase (1982/1985/1987/1989) STI on behalf of STIFL had to apply for funding at the Swiss Government without ever knowing what allocation would be granted, see: (ASTI), STIFL, Evolution/Integration, 1988–1994, The Evolution of IFAKARA CENTER – STIFL and its future perspective [no date], p. 1.
- 95 Don De Savigny paraphrased in: (ASTI), STIFL 1.2. General, Policy, Evaluation, Ulrich Schmid (sda), Tropeninstitut Ifakara. Praxisorientierte Feldforschung, pp. 1–4, here: p. 2.
- 96 Helga Nowotny, Peter Scott, Michael Gibbons, Re-Thinking Science. Knowledge and the Public in an Age of Uncertainty, Cambridge 2002, Nowotny, Re-Thinking Science. From Reliable Knowledge to Socially Robust Knowledge, in: Wolf Lepenies (ed.), *Entangled Histories and Negotiated Universals. Centers and Peripheries in a Changing World*, Frankfurt, New York 2003, pp. 14–31.

“socially robust” knowledge that is co-produced by various experts as well as protagonists from the “civil society.” The new site for this co-production is the agora which – in analogy to Greece’s historical tradition – is conceptualized as an open political space where criticism can be uttered and where one’s “right to speak in the name of nature” is constantly mediated.⁹⁷ Accordingly, the “new” spirit of PHC that reigned in the aftermath of Alma Ata and far into the 1980s, was to create new platforms for interactions between Western scientists and the local farmers and to calibrate the different expectations. Now working within rural communities, STIFL scientists for the first time had to explain and legitimize their presence in the villages and to offer manifest benefits in return for scientific specimens: what they established was a barter economy where body tissues and fluids were bargained against water pipes and pit latrines. How can these changes be conceptualized and how were they interpreted in the light of the different cultural and historical experiences that separated the lives of biomedical protagonists and the rural farmers?

IN THE AGORA OF PRIMARY HEALTH CARE

To answer this question, it is revealing to listen carefully to Charles Mayombana who elaborated on this point in a talk in 2011. It was in 1977 that Mayombana left his home in Kagera region in Tanzania’s north and enrolled as a student of the MATC in Ifakara. At the end of his studies he met Marcel Tanner who was just about to take over responsibility of STIFL from Adrian Zumstein. There had been some informal talks between Tanner and Mayombana about the latter’s future commitment for the STI in Kilombero district, but at the time Tanner was unable to make any sound promises. Mayombana went to Kagera region where he found employment in the regional hospital. In 1983 and with STIFL’s turn towards applied and operational field studies, Tanner called him back to Ifakara where he became the institute’s first senior staff member and acted as a link between STIFL and the communities. For him, the difference between his hospital work in Kagera and his new position working closely with rural communities could not be more pronounced:

“That is really the difference. In the clinic you are sitting there and you are waiting for patients to come. They tell you their problem, you treat them and they pay much more attention to you because they came to seek health. The difference with my second job which was more in the village improving public health was different because you talk about malaria, you talk about bilharzia, you talk about what the district health system should do to improve the health of the people all this kind of things. Sometimes it is not

97 Nowotny, Keine Angst vor der Agora, in: ETH Bulletin, Vol. 277, 2000, pp. 8–12, here: p. 11.

their problem [...] We were supposed to be doing that because in the training we were also taught how to do for example community diagnosis, yes? Before patients come you look through the window to see where they live and what makes them sick, yes, various factors from family to the individual. So this is the difference. So now, when you walk from the hospital and go there to see them and talk about what normally they suffer from this is fine but when you come to a stage whereby “Can I take your blood?” “Can I check your stool?”, “Can I check your urine?”, then the view point is different because “Why are you interested to look at me when I am not sick?”⁹⁸

The only legitimate reason to work within communities and approach farming societies at all was PHC. In 1983, Tanzania officially adopted the PHC approach and embarked on a village health worker scheme (VHW) in five pilot regions.⁹⁹ However, the execution of the diverse PHC programs rested mainly in the hands of foreign NGO's. From a Western science perspective, PHC and the answer to the question “*why are you interested in looking at me when I am not sick?*” required a new approach, the logic of which went beyond interventions based on mere epidemiological data. This data is however key to a better understanding of how biomedical interactions altered over the course of PHC. In 1982, STIFL set up its own VHW-program, trained and installed VHW in the three quarters of Kikwawila and organized the provision of “*essential drugs.*”¹⁰⁰ The men and women selected by their respective community were in charge of curative as well as preventive health care.¹⁰¹ One of their duties was to meticulously report on the reasons why the sufferers sought advice at their village health posts. The headache/fever complex (malaria) was the by far most serious killer in the village, followed by other ailments such as respiratory tract infections, gastroenteritis or eye and skin diseases.¹⁰² In 1982 schistosomiasis was not mentioned at all, but from 1983 and 1984 onwards, it started to emerge as one of the reported symptoms, especially among children. The difference in the perceptions of malaria and schistosomiasis is not difficult to explain. It has mainly to do with the unequal course of the diseases: while malaria

98 Interview with Charles Mayombana, 09.02.2011.

99 Ministry of Health, National Guidelines for the Implementation of the Primary Health Care Program in Tanzania, Dar es Salaam 1983, (TNA), 450/HEH/30/7, Primary Health Care, Flavian Magari, Julius Sepeku, Country Paper on Organization and Implementation of Primary Health Care in Tanzania. Presented at the South-East Asia Regional Conference on PHC 7–16 September, 1983, Pyongyang, The Democratic Peoples' Republic of Korea, pp. 1–12.

100 (ASTI), STIFL, PHC, 3.2 (P.1), Working Document No. 1, Collaborative Primary Health Care Project in Kilombero District, Tanzania, September 1989, pp. 1–22.

101 Marcel Tanner et al., Longitudinal Study of the Health Status of Children in Kikwawila Village, p. 133.

102 Antoine Degrémont et al., Longitudinal Study of the Health Status of Children in a Rural Tanzanian Community. Comparison of Community-Based Clinical Examinations, the Diseases Seen at Village Health Posts and the Perception of Health Problems by the Population, in: Acta Tropica, Vol. 44, 1987, pp. 175–190, here: p. 179.

often kills very rapidly, schistosomiasis develops chronically and even though parasitological data might reveal a clear picture, the villagers related the disease to general fatigue and indisposition.¹⁰³ The important point here is that conventional health interventions would have taken the morbidity and mortality patterns and vertically tackled these specific diseases. In contrast, health interventions within a PHC-context brought researchers and villagers together in joint gatherings to discuss about certain public health and development priorities. What the STIFL scientists had to learn was that public health problems did not rank very high amongst the Kikwawilians at all. More pressing for them was to follow up on the promises of the villagization campaign that fell short of their expectations as far as the improvement of village infrastructure was concerned. The different parties then agreed the following: in collaboration with the SDC and other NGO's, STIFL would try to improve the water supply system which was embedded in a schistosomiasis control program and said to guarantee the villagers' support for further health interventions. To put it in Marcel Tanner's words: "*The implementation of a water supply scheme is the spearhead of the ongoing and future actions: it assures community participation. At the same time it prepares the ground for the initiation of latrine campaigns [...]*"¹⁰⁴ Thus, the water pipe was the starting point from which all the other PHC projects would derive for the researchers but also the end product which should channel all the present interactions for the villagers. This construction very much shaped the villagers' answers during the research process. "*For the standard questionnaires and the household interview,*" Antoine Degrémont writes, "*people were also influenced in their answers, particularly those concerning schistosomiasis, by the interest and activities of health professionals they were aware of behind the interviewers.*"¹⁰⁵ In short, as much as schistosomiasis was a biological entity encountered through the lenses of Western microscopes, it owed its presence in the village to the different, culturally-shaped interactions and expectations. Retrospectively, the reason why STIFL chose schistosomiasis as one of its main targets was no longer explained by the wish for infrastructural improvement, but could hardly be explained at all. Asked about why, in his opinion, Swiss scientists put quite some emphasis on schistosomiasis control, one of the former VHW had this to say:

103 This is not to say that there is no need to engage in schistosomiasis control. Taken together with all the other "neglected tropical diseases" it accounts for a higher mortality than for instance malaria and its disappearance from the public health agenda today has certainly to be objected.

104 Marcel Tanner et al., Community Participation within a Primary Health Care Programme, in: *Tropical Medicine and Parasitology*, Vol. 37, 1986, pp. 164–167, here: p. 167.

105 Antoine Degrémont et al., *Longitudinal Study of the Health Status of Children in a Rural Tanzanian Community*, p. 187.

I: Why then did STIFL decide to tackle bilharzia and not malaria?

JM: “I don’t know why they selected bilharzia because at that time most children were dying from malaria. They [people from STIFL, LM] sat together with the village authorities and they saw that bilharzia affected more people especially the children who went to the river.”

I: Would you have preferred an intervention that addressed malaria instead of bilharzia?

JM: “You see, malaria we could prevent but bilharzia at that time we could not prevent.”¹⁰⁶

However, the agora was never the space that allowed for a non-restrictive and non-hierarchical exchange between scientists and villages but, on the contrary, it was where power struggles at various levels became more pronounced. It became evident that the agreement to exchange water pipes for body fluids and individual compliance had ended. On several occasions, STIFL scientists complained about the villagers’ reluctance to fully embrace latrine construction and the village leadership started to fine the laggards. The work of the VHW’s – some of whom confounded their appointment with a “government position rather than a community worker”¹⁰⁷ – also involved strong components of social control. One of the former VHW’s in Kikwawila remembered herself hiding behind a tree close to the river in order to record who, at what time and how people were using the river and thus causing widespread discomfort among the villagers.¹⁰⁸ Historian Rebecca Marsland discerned different understandings of the term “participation” which competed with each other in Tanzanian local development contexts. The one proposed by Western development experts echoes notions of “empowerment” and “involvement” while the other is more deeply embedded in Tanzanian history and informed by the notion of “self-reliance” (kujitegemea) in which citizens are obliged to contribute their labour and resources in a community effort to “build the nation.”¹⁰⁹ Marsland concludes that “participation” in Tanzania was such a popular concept because it invoked kujitegemea and allowed the Tanzanian state to “retain control over its citizens.”¹¹⁰ In 1976, the “Ujamaa Village Act” allowed the village government to pass “appropriate” by-laws for the promotion of health in their respective villages. The areas which deserved special attention ranged from building “adequate” houses, to sanitation and personal hygiene and the suppression of “harmful cultural practices.”¹¹¹ This legal framework was still shaping the relationship between the village leadership and the villagers when STIFL started its community-based health projects. Confronted with the mixed success of latrine promotion, one of the scientists made clear:

106 Interview with JM, Kikwawila 2009.

107 (AIHI), Unbeschriftet, Charles Mayombana, Village Health Workers in Kilombero District. Training, Performance and Supervision, p. 4.

108 Interview with TJ, Kikwawila, 04.04.2010.

109 Rebecca Marsland, Community Participation the Tanzanian Way, p. 66.

110 Ibid., p. 70.

111 Ministry of Health, Guidelines for the Implementation, p. 53.

*“Sometimes you have to push development, especially those kind of developments that people would not really see, looking at as really necessary, like latrines, – you know there are many bushes in Kikwawila [...]”*¹¹²

Swiss and Tanzanian scientists were the first to acknowledge that *“development is very political in Tanzania.”*¹¹³ The comparison with the STIFL-led VHW-program conducted in Namawala was especially instructive for how the *“political anatomy”* of villages impinged on public health interventions.¹¹⁴ Unlike Kikwawila, Namawala emerged during the villagization campaign in the 1970s and was administered by an effective leadership that was always ready to contribute to the salaries of the VHW in order to enhance their commitment. Juxtaposing Namawala and Kikwawila, scientist Charles Mayombana mused:

*“Whereas there is quite a good integration of the village health workers in one village where even remuneration and support from the community has been achieved, the lack of leadership in the other villages make the implementation of PRIMARY HEALTH CARE difficult. It is worthwhile to mention that the request to have village health workers came from the community in the first village and that this community might be better motivated to support their village health workers than the latter. The strong leadership in the first village contributed to the successful running of a village health post.”*¹¹⁵

Success or failure of PHC-programs did not depend on the political organization of the villages only. Not least because of the activities of STIFL, in the 1980s Kilombero district became one of the favorite intervention sites for other powerful health protagonists, who displayed a more vertical approach towards PHC than STIFL. This was true for UNICEF which, according to STIFL-scientists Don DeSavigny and Christoph Hatz, operated as the *“second or parallel Ministry of Health in Tanzania”* and which, from 1987 onwards, embarked on a large-scale PHC/NUTRITION program in Morogoro region.¹¹⁶ STIFL was eager to foster close links with UNICEF, not least because such collaboration facilitated the exchange of relevant biomedical data which could possibly not have been provided by the Tanzanian

112 Anonymized, Interview held in Dar es Salaam, 2011.

113 Jennings, *“Development is Very Political in Tanzania.”* Oxfam & the Chunya Integrated Development Programme, 1972–1976, in: Ondine Barrow and Michael Jennings (eds.), *The Charitable Impulse. NGO's and Development in East and North-East Africa*, Oxford, Bloomfield CT 2001, pp. 109–132.

114 Tanner, *From the Bench to the Field. Control of Parasitic Infections within Primary Health Care*, in: *Parasitology*, Vol. 99, 1989, pp. 81–92, here: p. 84.

115 (AIHI), Unbeschriftet, Mayombana, *Village Health Workers in Kilombero District*, p. 3.

116 (ASTI), KIHIRE Letters, 1985–1988, Don De Savigny, Christoph Hatz, 07.03.1986, pp. 1–15, here: p. 7.

MOH.¹¹⁷ While acknowledging all the serious attempts to integrate the activities into district structures, the performance of powerful health protagonists such as UNICEF and STIFL raises questions about the sustainability of PHC-projects. In the majority of cases, the district health authorities of Kilombero were not in a position to continue the initiated health interventions. Apart from the creation of double-health structures, which in the case of UNICEF assigned Tanzanian health agencies a minor role in the health sector, one major reason for the district's weaknesses was that, despite all assertions, the process of shifting power from the administrative center to the periphery remained mere rhetoric, thus "leaving pilot projects alone, drifting on one or the other side of the road to 'health for all' but not on that to community development."¹¹⁸ As a consequence, Western health protagonists often tried to artificially sustain the interventions. Despite the initial plans to hand over all PHC activities to Kilombero's PHC coordinator, Cletus Makero, in 1986, two years later STIFL still covered most of the expenses for the VHWS and for the running of the "Village Essential Drug Programme for Kilombero District", thus curbing the district's notorious complaints about financial constraints.¹¹⁹ From the perspective of the Western biomedical organizations, the health system was only functional when it was activated and sustained through ongoing impulses.

BRINGING SCIENCE BACK IN: THE EMERGENCE OF A NEW DISPOSITIVE

This last remark already belongs to the sobering end of a decade that started with so much verve and development optimism. At the end of the 1960s, Tanzania was considered a role model in exchanging curative for preventive medicine and in actively involving rural "communities" in this new (or re-emerging) health regime. By reversing the causal link between health and development, the East African country influenced Swiss development policies in the corridors of power in Switzerland, as well as the practices in Kilombero district. New financial modalities within Swiss development work and the new policy context of

117 Tanner, Monitoring of Community Health Status. Experience from a Case Study in Tanzania, in: Acta Tropica, Vol. 44, 1987, pp. 260–270, here: p. 268.

118 (ASTI), KIHARE Letters, 1985–1988, Marcel Tanner to Christoph Hatz and Calum Macpherson, 29.05.1988, p. 4.

119 Ibid., Letter to Don De Savigny, 21.02.1986, pp. 1–13, here: p. 8, (ASTI), KIHARE File 1988, Jan bis Juni, B. Chahali (District Executive Director) to Christoph Hatz (STIFL), REF: Village Health Workers in Kilombero, 18.01.1988, pp. 1–2 and Christoph Hatz's response, 23.02.1988, pp. 1–2.

socialism and decentralization in Tanzania gave rise to a new scientific dispositive in Kilmington – understood by Michel Foucault as a heterogeneous entity made of discourses, institutions, scientific doctrines, laws and so on.¹²⁰ The new formation had its new pathologies (bilharzia), its renewed scientific paradigms (PHC) and its new practices. Prominent locus became the laboratory and scientific research that was re-vitalized through its close link to development ideology. However, in practice the laboratory lost many of its former constituencies. Instead of science being practiced within laboratory walls, the local “community” living around Ifakara became actively involved in the research process. Through this translation of the laboratory to the field, the former boundaries between lab and society became more and more undistinguishable. STIFL scientists started to immerse themselves into African society, collecting necessary health-related data on the basis of which new interventions could be evaluated. What they brought with them was a new mode of knowledge generation that followed an experimental logic: instead of testing new approaches within laboratory walls in order to later apply them to society, the rural communities became the site where the formerly separated activities of research and application coalesced.¹²¹ What can be observed, however, is not just a process of scientification of African communities but a reverse process of society “speaking back” to the Western and Tanzanian scientists. The premise of “participatory development” required new strategies and research outcomes that were not only “reliable” but “socially robust.” As the example of Kikawila has shown, at stake were not only negotiations about which disease to tackle but also to engage in material improvements which in turn should guarantee the villagers’ compliance to the public health projects. However, the Western concepts of “participation,” “development,” and “local empowerment” could not easily be transferred to Kikawila and other sites, the reason for which being the multilayered and somehow contradictory meanings behind the term “participation”, as well as different understandings of what and for whom “development” should be. Anthropologist Maia Green once argued that Ulanga’s rural inhabitants have a very different understanding of development than that brought in by Western development agencies: instead of relating the term “maendeleo” (development) to the “forthcoming” of entire communities, they emphasize personal development. More than

120 Gilles Deleuze argued for a dynamic understanding of Foucault’s term, see: Deleuze, Was ist ein Dispositiv?, in: François Ewald and Bernhard Waldenfels (eds.), *Spiele der Wahrheit. Michel Foucaults Denken*, Frankfurt am Main 1991, pp. 153–162.

121 Richard Rottenburg, Social and Public Experiments and New Figurations of Science and Politics in Postcolonial Africa, in: *Postcolonial Studies*, Vol. 12, No. 4, 2009, pp. 423–440.

anything, development means “*development of a person by themselves.*”¹²² This does not mean, of course, that individuals did not profit from the Western development projects. For a short time at least, the vhw of Kikwawila assumed a new role in their communities, climbing up the ladder of social mobility. But still, what people in Kikwawila long for and what is inscribed on the list Twaibu Likumi handed over to me, is a concept of development that did not follow Western prescribed ideals of community participation and progress. Far from being just ephemeral episodes in the course of a Ph.D. study, the two water pipes – real and visionary – are the material signs of improvement and the immaterial “*expectations of modernity*” that capture the changes in the organization and practices of scientific research in Kilombero district at the beginning of the 1980s.¹²³

122 Maia Green, Participatory Development and the Appropriation of Agency in Southern Tanzania, in: Critique of Anthropology, Vol. 20, No. 1, 2000, pp.67–89, here: p. 81.

123 James Ferguson, Expectations of Modernity. Myths and Meanings of Urban Life on the Zambian Copperbelt, Berkeley 1999.

CHAPTER 6

Towards Transnational Governmentality. Transforming Swiss Science During the Period of Structural Adjustment, 1980—1990

ECONOMIC CONSTRAINTS

The causal link between development and health and the idea that community participation would contribute to Western notions of “*emancipation*” and “*empowerment*” were not very persistent. The ideals formulated at Alma Ata evaporated to the extent to which African economies underwent drastic changes during the “*adjustment regimes*.”¹ Both, Côte d’Ivoire and Tanzania were badly affected by the oil shock of 1973 and this caused a chain reaction. In Côte d’Ivoire the period marked the end of years of political stability and economic performance unmatched in sub-Saharan Africa. The collapse of world market prices for cocoa and coffee at the end of the 1970s led to what Bruno Losch has called a “*double relegation*” (double *déclassement*). Economically, the new situation put an end to the once successful Ivoirian marketing system characterized by a strong alliance between the government and French Lebanese traders as well as planters and politically, the African country increasingly shifted out of France’s focus of being one of the geo-strategically most important territories in Africa.²

Tanzania, too, was badly affected by the new economic realities. As Deborah Bryceson noted, the price explosion led to striking deficits on the country’s import bill and to rising international shipping costs, which in turn boosted the prices for domestic transport of

1 Nicholas van de Walle, *African Economies and the Politics of Permanent Crisis, 1979–1999*, Cambridge 2001.

2 Bruno Losch, *Libéralisation économique et crise politique en Côte d’Ivoire*, in: *Critique Internationale*, Vol. 19, No. 2, 2003, pp. 48–60, Losch, *Côte d’Ivoire, la tentation ethnonationaliste*, in: *Politique Africaine*, Vol. 78, 2000, pp. 5–25, here: p. 10.

farmers' export crops.³ Inadequate rainfall during 1973–1975, coupled with the constraints of Nyerere's villagization program, brought several of Tanzania's rural areas to the brink of a serious hunger crisis. Even though the country's economy recovered slightly in 1976 and 1977, the country's invasion by the Ugandan army in fall 1978 and the war waged against Idi Amin, consumed the lion's share of Tanzania's scarce resources.⁴ After a further economic crisis in 1979, the Tanzanian government entered a period of economic reform in 1980, following the IMF's and the WORLD BANK's quest for a liberalization of markets and public services.⁵ The IMF's politics of conditionality left African governments deprived of any possibility to influence vital policy areas such as health care provision.⁶

Even though Paul Nugent deliberately reminded us not to simplistically draw a direct line from foreign-imposed structural adjustment programs (SAP's) to their possible adverse effects, just because they were never applied in their entirety, the negative experiences of SAP's in the realm of health care were deeply engrained in the memories of the STI researchers working in Tanzania, as well as the Tanzanian population.⁷ Writing from Ifakara, STI scientists and successors of Marcel Tanner as directors of the field laboratory, Christoph Hatz and Don DeSavigny remarked:

3 Deborah F. Bryceson, *Agrarian Fundamentalism or Foresight? Revisiting Nyerere's Vision for Rural Tanzania*, in: Kjell Havnevik and Aida C. Isinika (eds.), *Tanzania in Transition. From Nyerere to Mkapa*, Dar es Salaam 2010, pp. 71–98, here: p. 76.

4 Ibid.

5 In 1991, Tanzania abandoned its socialist health policy and introduced measures to privatize the country's health sector. Cost sharing was introduced in different phases through user-fees in the public health care system, see for instance: Aili M. Tripp, *Changing the Rules. The Politics of Liberalization and the Urban Informal Economy in Tanzania*, Berkeley 1997.

6 Among the burgeoning literature see for instance, Turshen, *Privatizing Health Services in Africa*, New Brunswick, New Jersey 1999, Angwara D. Kiwara, *Health and Health Care in Structurally Adjusting Tanzania*, in: Lucian Msambichaka, Humphrey P.B. Moshi and Fidelis P. Mtatifikolo (eds.), *Development Challenges and Strategies for Tanzania. An Agenda for the 21st Century*, Dar es Salaam 1994, pp. 296–290, Andrew Kiondo, *Structural Adjustment and Non-Governmental Organizations in Tanzania. A Case Study*, in: Peter Gibbon (ed.), *Social Change and Economic Reform in Africa*, Uppsala 1993, pp. 161–183, N. J. Spalding, *State-Society Relations in Africa. An Exploration of the Tanzanian Experience*, in: *Polity*, Vol. 29, 1996, pp. 65–96.

7 Paul Nugent, *Africa Since Independence*, Basingstoke 2004, p. 334, the appreciation private practice in health care for one's own well-being depends largely from which position one speaks, see: Vinay Kamat, *"This Is Not Our Culture!" Discourses of Nostalgia and Narratives of Health Concerns in Post-Socialist Tanzania*, in: *Africa*, Vol. 78, No. 3, 2008, pp. 359–383, Margunn M. Bech, *Changing Policies and their Influence on the Interaction between Health Workers and Patients. A Government Health Worker Perspective from Rural Mbulu District, Tanzania*, paper presented at the international conference *"The History of Health Care in Africa. Actors, Experiences, and Perspectives in the 20th Century"*, Basel, 12th-14th September 2011.

*“The major event is the first budget of [Ali Hassan] Mwinyi [...] which moves substantially towards the IMF requirements and is resulting in rapid devaluation of the shilling. Prices have jumped another 50% just in the last week and will entail more hardship for the Tanzanians since there is no immediate provision to increase wages.”*⁸

In addition to the skyrocketing prices for fuel and food, in the first half of 1986, Kilombero district suffered from a flood that devoured entire parts of the district and left people without homes and crops.⁹ The district’s economic foundations were not just shaped by the policies of structural adjustment but perhaps more fundamentally by Tanzania’s large-scale development undertakings that date back to the 1970s. Above all the construction of the Chinese-sponsored Tanzania-Zambia Railway (TAZARA), which zigzagged through Kilombero district to connect Dar es Salaam with the Zambian copper-belt, acted as a magnet for laborers arriving from the Mbeya, Iringa and Ruvuma regions.¹⁰ In her subtle account of the history of the “Freedom Railway”, Jamie Monson not only emphasized the connection between railway construction and Nyerere’s resettlement policies, but hinted at the symbolic qualities of the railway to transport people’s claims to an overstrained Tanzanian state. Equally important, TAZARA brought new economic opportunities especially for small-scale traders who in the era of structural adjustment were not forced anymore to sell their products to government cooperatives but could exchange their crops directly in local and regional markets.¹¹

Notwithstanding the many local initiatives and the shifting of the lens from the local to the policy level, the hollowing-out of government structures during structural adjustment had a strong impact on Swiss development policies in Tanzania. Given this background, this chapter describes a period of transition of the two laboratories, at the end of which Swiss science emerged as a most powerful assemblage, being both locally-tied and more internationally-anchored at the same time. The paradoxes of this transition of Swiss science becoming at once more “African” and more “global” are best captured by reviewing the

8 (ASTI), KIHIRE Letters, 1985–1988, Christoph Hatz, Don DeSavigny, 04.07.1986, pp. 1–8, here: p. 1, Ali Hassan Mwinyi’s term as president lasted from 1985 to 1995. Under his presidency, the country loosened its socialist policy and turned towards a more liberal market economy.

9 Ibid., Don DeSavigny, 08.04.1986, pp. 1–2, here: p. 1.

10 Rudolf Peter Mayombo, Economic Structural Changes and Population Migration in Kilombero Valley, Ph.D. Study University of Dar es Salaam, Dar es Salaam 1990, p. 94.

11 Monson, Africa’s Freedom Railway. How a Chinese Development Project Changed Lives and Livelihoods in Tanzania, Bloomington, Indiana 2009, p. 103.

redistribution of power, displaying its effects on the micro-processes such as institutional integration, administrative reforms, staff development or the struggles amongst the various actors in the field of Swiss development aid. A good entry point into the micro-fabric of Switzerland's late decolonization is the acknowledgement of the disillusionment about the past development efforts which started to bother politicians, development workers and the wider public during the 1980s.

DEVELOPMENT'S HANGOVER AND THE FAILURE OF PRIMARY HEALTH CARE

At the beginning of the 1980s, Swiss development aid found itself in a state of sobering self-reflection. The enthusiasm of the 1960s and 1970s, when development meant a transfer of Western technology to the countries of the Third World, evaporated and brought about the insight that, even after countless initiatives, the development indicators drawn up for the Third World still did not show any signs of improvement. At home, development aid as a policy and practice had to defend itself against an increasing number of critics from civil society and from the political arena, who interpreted the efforts either as a neo-imperialist strategy cementing global inequalities or – less theoretically – as a waste of taxpayer's money. In other words, development aid in the 1980s was highly contested.¹² In 1983, member of government, Pierre Aubert legitimized budget-cuts for development aid with the words

“The government's appreciation of the needs of Third World countries has not changed. However the confederations financial politics – and in particular the parliament's motion to regain financial stability – does not allow anymore to support the rhythm of growth of our public aid as in the last years. The priorities set by the Swiss parliament in terms of financial policy mean that any increase in public development spending must be in line with the growth of Switzerland's own resources.”¹³

Past health interventions executed in the name of development aid could also not escape critical reflection. As the last chapter briefly hinted at, PHC in its comprehensive dimension has been subverted from the very moment the idea was born. However, in many development agencies the principles of PHC remained unchallenged, especially in normative discussions about the most rewarding approaches towards health in tropical countries.

12 Kuhn, Entwicklungspolitische Solidarität, p. 24.

13 (ASTI), DEH/DDA, Arbeitsgruppe Gesundheit, Korrespondenz allgemein, Pierre Aubert, 31.01.1983, pp. 1–2, here: p. 2.

SDC's health policy designed for the Third World did not much change during the 1980s. Even though from the mid-1980s, policy-makers at SDC laid more emphasis on the implementation of health policies or more focus on certain health aspects within the overarching framework of "health systems," the key messages uttered at Alma Ata still reverberated strongly in Swiss medical aid.¹⁴ However, one of the consequences that derived from a tight budget for development intervention, was that development was not just considered as a planned endeavor but that its "outputs," "outcomes" and "impacts" could be measured according to previously defined categories. This insight gave rise to a series of evaluations which, as a new cultural technique of writing and reasoning about development, not just consumed much of the time previously invested in project work but which started to show serious cracks in the edifice of PHC. In particular, it became accepted wisdom that the ideas and promises of PHC did not easily bear fruit in the context of economic constraints. A key document conveying this message was the second SDC-commissioned evaluation of their medical work in Tanzania, published in 1986.¹⁵ Brian Cooksey, the main author of the study, recommended Switzerland's continuing involvement in the Tanzanian health sector until the year 2000, albeit with a stronger emphasis on "planning, monitoring and evaluation" as core activities, as well as a concentration of efforts within the politico-administrative boundaries of Kilombero district.¹⁶ More thought-provoking, however, was his assessment of the efforts in the area of PHC undertaken so far. As the authors wrote:

14 (ASTI), DEH/DDA, Arbeitsgruppe Gesundheit, Dokumente allgemein, III, Immita Cornaz, Summary. Health Policy of Swiss Development Cooperation (SDC), 21.07.1986, SDC Health Policy. Possible New Developments, 25.07.1986, Cornaz, Santé et Développement. Exposé à l'Association Suisse de Médecine Tropicale et de Parasitologie. 18.11.1988, in: Bulletin Medicus Mundi Schweiz, Vol. 45, 1990, pp. 5–15.

15 (AIHI), P. 40, Brian Cooksey et al., Evaluation of Swiss-Funded Health Projects in Tanzania. A Report for Swiss Development Cooperation, November 1986, pp. 1–69. Already in 1977 an independent expert group scrutinized the working and impact of five of the DFTZ-supported health projects, prominent among which were the Central Pathology Laboratory (CPL) in Dar es Salaam, the MATC as well as the ST. FRANCIS HOSPITAL in Ifakara. While the impact of the CPL on rural health care and fostering PHC was never much debated, the evaluation of the MATC was more conflict-laden because its accordance with the quest of nurturing a primary health care structure in Kilombero always seemed exaggerated. In the eyes of WHO expert Daniel Flahault, the closeness of the MATC to ST. FRANCIS HOSPITAL precluded the training centre from really embracing preventive approaches. As he notes: "[...] it seems that not enough emphasis has been given in the past to preventive services, and this may be due to the fact that the St. Francis hospital is very much oriented towards curative services, most of the teachers are clinically oriented and because diagnosing and treating are more immediately rewarding," see: (ASTI), Klaus Gyr, Swiss-Tanzanian Joint Evaluation of Swiss Cooperation to Tanzanian Health Projects, May 1977 and (ASTI), Daniel Flahault, Swiss Tanzanian Joint Evaluation of Swiss Cooperation to Tanzanian Health Projects. Sectorial Report on Education and Training in the Field of Health, April 1977, p. 16.

16 (AIHI), P. 40, Cooksey et al., Evaluation, p. 6.

“We have seen that in practice the implementation of PHC policy in Tanzania has been severely limited by the inertia of the existing health system with its established urban/curative bias. Despite the significant progress made to date, the primary health component does not yet constitute the core element of the national health system, either in terms of services or support activities. Substantial donor, including Swiss, support goes to the maintenance of the “non-PHC” elements of the system.”¹⁷

It is striking that the failures of PHC in practice were never associated with the mismatch between the PHC’s utopia and the logic of development projects that seek fast and measurable results, but to a changing socio-economic context that inhibited the conducting of meaningful development work. The conclusions drawn from the assessment of Switzerland’s involvement in the Tanzanian health system touches upon some of the most striking paradoxes of Western (though well-intentioned) support for the Tanzanian health system: Tanzania’s increasing dependence on Western aid and the economic remedies described by the IMF and the WORLD BANK led to dysfunctional health systems and probably to the sufferers’ alienation towards biomedicine in their quest for “adequate” therapy.¹⁸ According to the observers, the fact that medical aid did not reach those most in need of it was, however, not due to contradictory donor strategies but rather because “the authorities do not have the requisite absorptive capacity to plan the integration of health aid into the national health-care system.”¹⁹ In other words, the blame about the failures of PHC was placed on the Africans themselves rather than on the international aid system.

The economic downturn, the decreasing standard of living of people in Kilombero district and the retained enthusiasm for PHC provides the context for two political processes that will be detailed below. The one concerns the attempts to integrate STIFL into a Tanzanian health system; the other the reconfiguration of development aid in Kilombero district following discussions between SDC and the STI about whether or not biomedical research is a suitable framework for raising the standards of living and people’s ability for “self-reliance” in Tanzania.

17 Ibid., p. 13.

18 Maia Green argued that the “decline in utilisation of public health services, particularly among the poor, is not simply due to perceptions of increased costs, although these are significant, but to an emerging national culture of distrust of state medical provision,” see: Green, Public Reform and the Privatisation of Poverty. Some Institutional Determinants of Health Seeking Behaviour in Southern Tanzania, in: Culture, Medicine and Psychiatry, Vol. 24, 2000, pp. 403–430, here: p. 405.

19 (AIHI), Cooksey et al., Evaluation, p. 21.

Integrating the Swiss Tropical Institute Field Laboratory into Tanzanian Health Structures

In the year of his replacement as head of STIFL and after having opened up new venues for scientific research in Tanzania, in his text *“concept pour le laboratoire du terrain du STI à Ifakara”*, Marcel Tanner formulated different strategies about what the laboratory could look like in the future.²⁰ The past experiences and the extensive work in Kilombero district provided him with the insight that *“in the long run, STIFL has to be integrated into Tanzanian health structures, led by Tanzanians and thus answering their priorities as well as their possibilities.”*²¹

Even though Tanner had sketched similar plans already before he left for the field, the quest for transformation became more pressing, with SDC taking over financial responsibility for STIFL in 1982. Indeed, the question of integrating the field laboratory into Tanzanian health structures and the issues of power attached to such a move was one of those subjects vividly discussed between SDC and the STI throughout the 1980s. The wish for integration derived not only from STI’s moral obligation but from the fact that with SDC taking the lead over STIFL, the laboratory had to be transformed into a local institution and the role of the STI thus limited to *“one of an implementing, executing agency, with involvement, of course, in all important issues and steps.”*²² Complexity of the matter arose from the difficult task of accommodating STIFL’s research tradition with that of possible Tanzanian partner institutions, while not losing influence over the Tanzanian health sector altogether.²³ As it turned out, STIFL’s three axes of training, research and service provision did not easily fit into one of the existing Tanzanian institutions. In 1988, the most probable institutions into which STIFL could be integrated were the NATIONAL INSTITUTE FOR MEDICAL RESEARCH (NIMR), the MINISTRY OF HEALTH (MOH) or the TANZANIAN PUBLIC HEALTH ASSOCIATION (TPHA), an NGO largely financed by Canadian funds.²⁴ NIMR was a parastatal organization created by a parliamentary act in 1979 and mandated to take responsibility over the research institutes operating in the country which, until the dissolution of the East African Community in 1977, were in the hands of the EAST AFRICAN MEDICAL RESEARCH COUNCIL. The colonial inheritance left NIMR with a research tradition very much geared towards vector control. This was just one of the reasons why NIMR’s first director, Wenceslaus Kilama, was very cautious to embrace the idea of integrating STI’s former field laboratory into the NIMR

20 (ASTI), STIFL, Correspondence, 1981–1987, Marcel Tanner, *Concept pour le laboratoire de terrain du STI à Ifakara*. Draft, January 1984, pp. 1–6.

21 *Ibid.*, p. 1.

22 (ASTI), STIFL, *Evolution/Integration, 1988–1994*, P. Fellay (SDC) to Antoine Degrémont, *Forthcoming Mission of Messrs. Degrémont and Tanner to Tanzania to Prepare Integration of STIFL*, 04.01.1988, pp. 1–2, here: p. 1.

23 *Ibid.*, Marcel Tanner, Antoine Degrémont, *Mission Report: Integration of the SWISS TROPICAL INSTITUTE FIELD LABORATORY (STIFL), Ifakara, into Tanzanian Structures*. SDC Mission 15.1.88–2.2.88, p. 56.

24 (ASTI), KIHIRE Letters, 1989-, Marcel Tanner to Calum Macpherson and Thomas Teuscher, 10.02.1989, p. 1.

cosmos. In addition, NIMR not only lacked the required manpower to assume responsibility over STIFL but also a concept of what role the laboratory could play within a Tanzanian health system.²⁵ NIMR's reluctance was not inconvenient to all of the STI's scientists. As one can imagine, the institutional decolonization process was supported to differing degrees and there was a certain dissent between those working in Switzerland and the scientists in the field. Writing from Ifakara, leading STIFL staff members Christoph Hatz and Calum Macpherson pleaded not to press too far ahead with the discussions.

“As Prof. Kilama is cautious concerning the future of STIFL we think that it is not necessary for STI/STIFL to push the handing-over but to work hard on a strong and integrated centre in Ifakara.”²⁶

An integration of STIFL through the MOH was also not considered a feasible solution. It was only in the realm of operational research where the MOH and STIFL shared a common feature but in the eyes of the STI the decision-making mechanisms of the government body were far too languid to move medical research in the country forward. Indeed, the MOH proved to be a difficult partner to deal with on the negotiation table. This became evident while discussing the TPHA option. Matching its own development ideals of “*self-help*”, SDC was very much in favor of integrating STIFL through the public health association in spite of the possible danger that STIFL, with its power and experience especially in fundraising, would eventually “*override*” the weak TPHA.²⁷ During a meeting held in 1989, the MOH did not at all object the TPHA solution. This was indeed surprising because it was an open secret that that Prof. Hiza, by then chief medical officer of the MOH and Prof. Kilama – the latter also being the chairman of TPHA – were not always on good terms with each other to put it mildly. Furthermore, “*TPHA may also become a competitor to the MOH, especially when it starts to become operational*”.²⁸ The doubts raised by the Swiss faction were confirmed one year later when during a further meeting between SDC, STIFL and the MOH, the Minister of Health contended:

25 (BAR), E 2025 (A), 1997/200, 642, t.311-Tansania.45, anonymized, MEMO: Betrifft: Nouvel dénomination pour le “SWISS TROPICAL INSTITUTE FIELD LABORATORY” (STIFL) d’Ifakara, 30.12.1987, p. 1.

26 (ASTI), KIHARE Letters, 1985–1988, Christoph Hatz, Calum MacPherson, 07.11.1987, pp. 1–4, here: p. 2.

27 (ASTI), STIFL, KIHARE, Proposal Regarding the Integration of STIFL, TPHA-Option – Positive Aspects, pp. 1–5, here: p. 4.

28 (BAR), E 2025 (A), 2000/138, 752, t.311-Tansania.45, anonymized, Minutes about the Discussions held on January 3, 1989 at STI-Basel, 05.01.1989, pp. 1–3, here: p. 2.

“Notwithstanding previous communication/discussions held with other members of the Ministry and the various correspondence exchanges between our two parties, as of now the Ministry’s position is that the TPHA integration option is out of question.”²⁹

Asked about the reasons why the Minister considered this modality not worth pursuing, the MOH argued that TPHA was not an NGO because all of its members were public servants. Furthermore, the Minister made it very clear that TPHA was weak and not capable of implementing any projects. To make it short: *“The Government has not and will not have any commitments of channeling its funds through TPHA.”³⁰*

Within the socialist setup of Tanzania, integration through a non-governmental organization was hardly feasible. *“We were still looking at government to do everything,”* Wenceslaus Kilama recalls this period saying that *“NGOs, including TPHA, were still suspect, although there was nothing wrong with them.”³¹* The MOH’s reaction brought STI and SDC back closer once again to the desired NIMR solution, which was acceptable to the latter, due to the substantial infrastructure and manpower support provided by the Swiss government. In 1991 STIFL was not formally integrated into the NIMR institutions but became an *“affiliate”* and was renamed IFAKARA CENTRE (IC). Five years later the research center once again changed its name into IFAKARA HEALTH RESEARCH AND DEVELOPMENT CENTRE (IHRDC) and was registered as a *“trust”* where Tanzanian partners today command a majority in the board of governors.

Thus, as opposed to the discussions about *“Africanizing”* the CSRS in Côte d’Ivoire described later in this chapter, the issue of *“integrating”* STIFL into Tanzanian structures was not so much a moral but a highly technical debate. For the Swiss party, integration meant including various stakeholders into the research process without however losing track of their own research interests. In their view, one of the major obstacles on the way was that the research institutions in Tanzania were either weak like the NIMR or not considered to be a beneficial body for STIFL to be integrated into, as was the case for the MOH. STIFL’s transition from a research base of the STI into an affiliate of NIMR becomes meaningful against the background of the wider political transitions in Tanzania which set in with the stepping down from power of Julius Nyerere in 1985 and which resulted in a multi-party

29 (ASTI), Kihere File 1990, January-June, Arnold Buluba (SDC), Note to the File: Summary Discussion with Minister of Health Regarding STIFL Integration in Tanzanian Health Structures – TPHA Option, 17.01.1990, pp. 1–4, here: p. 2.

30 Ibid.

31 Interview with Wenceslaus Kilama, 09.02.2011 in Dar es Salaam.

system and market liberalization one decade later. Marcel Tanner's conviction, uttered in 1984, that STIFL not only had to be integrated into Tanzanian health structures but more so led by Tanzanians and respond to "their" needs, has been usurped by a "culture of partnership" that since the 1990s has gained repute as the most rewarding solution to development problems. The IFAKARA HEALTH INSTITUTE (IHI, as STIFL is called today) occupies a privileged position within the Tanzanian health sector. According to members of the MOH, apart from NIMR, it is more or less the second institution the Ministry turns to when it has to assign research mandates. But it goes without saying that "public-private-partnerships" are also composed of strong and weak players. According to Salim Abdulla, director of the IHI, the Tanzanian MOH is still playing a negligible role within IHI's policy structure.³² A good indicator for the complex power relations that were triggered by the attempt to integrate the Western biomedical research into Tanzanian responsibility, are the discussions that surrounded the role and responsibilities of the first Tanzanian director, who is the protagonist of the next session.

Administrative Reforms

It is significant that in the middle of the discussions about how to integrate STIFL into Tanzanian structures and the questions about through which channels the networks of collaboration with Tanzanian counterparts would best materialize, the links to the STI were reaffirmed in a managerial reform first formulated in 1990. That is not to say that STIFL and the STI have not been working towards the inclusion of the various institutions on a district, regional and national level. Rather, it is suggested here, that the ongoing transformation of STIFL into a Tanzanian-based NGO went hand in hand with enhanced control of the STI over the fate of STIFL. This control perhaps becomes most feasible on an administrative level. In 1990 the many complaints about administrative overload at the field lab had finally been resolved by splitting up the scientific and administrative tasks between a scientific and an administrative director. While the former held the position of "chief scientist" and "project leader", the latter was responsible for providing the administrative basis for the research practices, as well as guaranteeing the administrative transition of the IC into the NIMR network.³³ Many of these new key positions still remained in the hands of expatriates. After the resignation of Calum Macpherson from the position of STIFL head in March 1990, the former deputy head Thomas Teuscher agreed to take over as head

32 Interview with Salim Abdulla, 12.02.2009 in Dar es Salaam.

33 (ASTI), KIHIRE Letters, 1989-, Agreement between the Swiss Federal Council and the Government of the United Republic of Tanzania concerning Kilombero Health Research Centre – Project. First Draft, 08.08.1991, pp.8–9.

and to represent the KIHHERE program in the name of STIFL and Stefan Mörgeli and Inez Azevedo supported the laboratory in their roles as administrative director and research scientist respectively.³⁴ SDC did follow these changes carefully and with a certain amount of mistrust for as one SDC member claimed the “*entire staff development is one of the crucial elements of transition/integration into Tanzanian structures.*”³⁵ As far as the new position of the administrative director was concerned, SDC agreed to cover the expenditure of this expat under the condition that his assignment was limited to two years and “*with the explicit objective of training and nurturing a Tanzanian administrative officer by the end of these 2 years.*”³⁶ More reason for discussion, however, was provided by the question of familiarizing a Tanzanian scientific director with the subtleties of leading a scientific research institution in a rural African setting. The professional requirements for this job were considerably high because NIMR stipulated that the future Tanzanian job holder should hold a Ph.D. in biology or other relevant fields. A promising candidate for this task was Andrew Kitua, who was born in Tanzania and a declared expert in the field of public health. Kitua was trained at the WHO and the LSHTM and had been working for the MOH on the Seychelles. Despite his vast working experiences, Kitua did not yet hold a doctoral degree. He was however selected as the most suitable candidate for the post and offered the job as the first Tanzanian director of the institute in 1992. The same year, Thomas Teuscher decided to step down from his post but remained in Ifakara until mid-1993, in order to “*devote more time to the public health and scientific issues.*”³⁷ The professional gap he opened up was not filled with Andrew Kitua, whose assignment only started in mid-1994. It was arranged that Kitua would come to Ifakara in the function of a senior community health officer/public health specialist starting from October 1st, 1992 until June 30th, 1994, and working on a Ph.D. study in the context of a vaccine trial conducted in the district, whereas the job of scientific director was laid into the hands of Thomas Schick. Schick was a Swiss physician more or less inexperienced in the field of tropical health compared to Andrew Kitua, but “*familiar with the approaches*”

34 (ASTI), Kihere File 1990, January-June, Marcel Tanner to Erwin Bânteli, RE: KIHHERE Health Research Programme; Changes in Management Structure, 15.03.1990, pp. 1–3, here: p. 1, the post of a research assistant has been shared between Dominique Morona and Inez Azevedo from 01.04.1990 onwards.

35 (BAR), E 2025 (A), 2000/138, 753, t.311-Tansania.45, Recherches médicales au SWISS TROPICAL INSTITUTE FIELD LAB. à Ifakara, Bd. 1–2, 1988–1989, anonymized, Subject: Ifakara Centre Proejct: staff developments – external evaluation, pp. 1–5, here: p. 1.

36 (ASTI), Kihere File 1990, January-June, Erwin Bânteli to Marcel Tanner, KIHHERE Health Research Programme; Changes in Management Structure, 04.04.1990, pp. 1–2, here: p. 1.

37 (BAR), E 2025 (A), 2000/138, 753, anonymisiert, RE: Ifakara – NIMR-Kihere-Project; follow-up Steering Committee Meeting 1 July and some specific future priority issues, 05.07.1992, pp. 1–5, here: p. 3.

of STIFL and the STI.³⁸ This constellation of two Swiss scientists supervising and evaluating a possible African scientific director for a period of two years in order to investigate his suitability for this job raised some eyebrows among SDC staff. As one of them openly expressed: *“The two-years evaluation (in his position as “senior community health officer) and the supervision (in his position as “scientific director”) of Mr. Kitua through Teuscher/Schick has a somewhat paternalist-colonial taste to me.”*³⁹ Andrew Kitua himself commented on the situation as follows:

I: “When you came to Ifakara in 1992 you had a period of two years while you were reviewed by Thomas Teuscher and Thomas Schick. How did you experience this period?

AK: *“I was not so happy with the future in Seychelles because I did not see my future there because the health situation was quite well and I felt guilty because I did not work where the problem is [...] so I did really want to work in Tanzania and coming back I was not aware about the long process how I was evaluated and I took it because I wanted to be in Tanzania and just thought well I will go through and in the beginning I was put as supervisor of the vaccine trial, of the persons outside...and because of those, at that moment I thought how best can I also benefit in the process and that is when I requested to do my Ph.D. through the project as well and that was accepted so here I was of course having a supervisor as a student which was Marcel Tanner, my supervisor as a student but also looking at the position, taking over the position as a director.”*

I: So you were in a quite ambivalent position being a Ph.D. student and scientific director at the same time?

AK: *“Yes, an ambivalent position yes.”*⁴⁰

Even after having assumed office as a scientific director, Kitua did not have much room for maneuver on a policy and administrative level. He acknowledged that all the core funding came from Switzerland, either from the SDC or the STI: the latter becoming active to mitigate the desolate financial situation. STI was also the body that made use of its networking skills and finalized the applications to global health organizations and national governments in order to diversify financial contributions. In the 1990s there was no Tanzanian institution that would have funded scientific research in Tanzania. It was only recently that Tanzania’s president agreed to allocate 1% of GDP to scientific research and the COMMISSION

38 Ibid.

39 Ibid., Ifakara-NIMR-Kihere-Project, 24.07.1992, pp. 1–2, here: p. 1.

40 Interview with Andrew Kitua, 22.01.2011 in Geneva.

FOR SCIENCE AND TECHNOLOGY (COSTECH) started to send out calls for proposals in order to stimulate scientific research.⁴¹ While the general power structure, i.e. the decision-making within the integration process, remained in the hands of Switzerland, there were nevertheless changes at the micro-level of scientific planning and execution. Kitua mentioned the process of defining research priorities, which was no longer the sole business of the Swiss partners, but shared among the Swiss and Tanzanian stakeholders and conducted in an atmosphere of trust and mutual collaboration.⁴²

These politics of staff development and the processes of handing-over coincide with changing aid modalities on an international level. Mainly what was at stake was a redistribution of responsibilities between the SDC and the STI/IC as far as their respective contribution to Kilombero's development was concerned.

Re-Modeling Development. The Micro-Politics of Development Aid
in the Post-Alma-Ata Era

The period of the structural adjustment regime in Tanzania and the development hand-over in Swiss and other European development agencies led to two significant tendencies within the international aid community. One major trait was an increased transnationalization of the aid sector following processes described by James Ferguson and Akhil Gupta as *“outsourcing of the functions of the state to NGO's and other ostensibly non-state agencies”* and most feasibly epitomized the appearance of the IDA/WORLD BANK on the stages of African health.⁴³ The other was a decisive shift away from what had been experienced in the 1960s and 1970s, when health became meaningful within the political and symbolic boundaries of the *“nation,”* towards a focus on district health systems which became the major units of foreign intervention. Transnational collaboration and sub-national intervention are easily perceptible in the case of Swiss development aid in Tanzania. At the beginning of the 1990s, SDC became a strong partner of the IDA/WORLD BANK in the *“Dar es Salaam Urban Health Project”* (DUHP), executed by the STI, as well as in the overall process of Tanzania's Health Sector Reform, with its emphasis on decentralization of financial and administrative power, comprehensive district health plans and a diversification of financial sources.⁴⁴ The focus on the Kilombero district as the major point of reference for Swiss development aid led to a redistribution of responsibilities between SDC and STI/IC and to a disentanglement of research and the provision of health services which characterized the period before.

41 Ibid.

42 Ibid.

43 Ferguson, Gupta, *Spatializing States*, p. 990.

44 (BAR), E 2200.83 (B), 2000/281, 8, 771.20.0, Technische Zusammenarbeit Schweiz-Tansania, allgemeines, Max Honegger et al., *Jahresbericht 1990 – Jahresprogramm 1991*, Januar 1991, pp. 1–12, here: p. 2, (AIHI), D.M.O (Kilombero) and R.M.O. (Ulanga), *Correspondence, Health Sector Reforms in Tanzania. Origin, Contents and Experience*, pp. 1–5, here: pp. 3–4, Gaspar K. Munishi, *Intervening to Address Constraints through Health Sector Reforms in Tanzania. Some Gains and the Unfinished Business*, in: *Journal of International Development*, Vol. 15, No. 1, 2003, pp. 115–131.

Overcoming the Past – Re-Inventing the Future. The Redistribution of the Development Burden within Kilombero District

The attempts to concentrate Switzerland’s health development efforts in the Kilombero district and to work out more “*integrated approaches*” led to a redistribution of responsibilities between the Swiss development institutions working in the district and a closer scrutiny of the activities of the IC and its KIHRE project. At stake here were questions like: which one of the two institutions that profited from long-lasting SDC support, the ST. FRANCIS HOSPITAL or the IC, was better suited to work towards an improvement of the health conditions of the local population? Which of them had the capacity to work out a comprehensive and realistic health plan with the district authorities that could then be turned into practice? And: What kind of exploitable results were left after the scientific machinery set in motion by the IC came to a halt? The SDC’s general suspicion as to whether scientific research – no matter whether or not termed “*basic*,” “*applied*” or “*operational*” – was really compatible with the development ideals they had in mind, reigned over the atmosphere in which the IC’s contributions were evaluated in 1993. One of the SDC members involved captured the prevalent opinion:

“After years of cohabitation between the renowned and sophisticated Ifakara Center and the over-sized St. Francis hospital [...] it is important that Kilombero District would benefit from measurable development impulses. In my opinion, one should be open for solutions which could be different from those stipulated at the moment; for instance working towards a real district-development-project with a strong community component and with a leading NGO [...] who is not so much on the biomedical side as this is the case of the Swiss Tropical Institute.”⁴⁵

The results presented by the evaluators in 1993 were nothing but linguistic variations of the above-quoted statement. Taken together, the evaluation hinted at two fundamental weaknesses of biomedical science as conducted by the IC in the Kilombero District. The first had more generally to do with scientific practices within a context of poverty. According to the evaluators, so far Swiss and Tanzanian researchers might have worked closely together with the district or regional authorities, they might have piled up data and information and made them available to the respective authorities. The neuralgic point, however, is that the DISTRICT HEALTH MEDICAL TEAMS (DHMT) do lack the “*tiniest means*” to translate the information into tangible improvements. “*Of what use is research*,” the authors asked rhetori-

45 (BAR), E 2025 (A), 2002/145, 802, t.311-Tansania.45, Recherches médicales au SWISS TROPICAL INSTITUTE FIELD LAB. à Ifakara, Bd. 5–7, 1992–1993, anonymisiert, Bericht Dienstreise nach Tansania vom 15.10–27.10.1992, pp. 1–2, here: p. 2.

cally, “if the results cannot be applied in practice for lack of funds and sustained cooperation?”⁴⁶ The second feature the evaluation debunked was the unequal power relations between the STI/IC and the Tanzanian partners in their quest for better health policies. The power imbalances are not only pertinent between the IC and Tanzanian collaborators but also between the STI and the IC, the former in fact controlling “the whole planning, financing, implementation and monitoring of research undertaken at Ifakara.”⁴⁷ STI’s strong position in the Tanzanian health sector is partly derived from its early presence in the district and the strategic alliances it could forge with different partners over time, as well as from the only rudimentary research infrastructure Tanzania inherited from British colonialism. However, as the evaluation pointed out, SDC did very much contribute towards strengthening the STI with regard to Tanzanian research bodies. The example of STIFL’s affiliation to the NIMR mentioned beforehand is telling. On the one hand, SDC mandated the STI to administer the Swiss support to NIMR, on the other, the STI’s former field station was to be integrated into the still weak NIMR research structure. This complex relationship between the STI and NIMR would lead to a “double-bind” which was “difficult to live with.”⁴⁸ As a useful strategy for the future, the authors proposed scientific research to be more “demand driven”, as well as a stronger focus on health systems research instead of the concentration on single pathologies – a proposition which met with widespread contestations among NIMR scientists, who defended a disease-oriented approach as a vital condition in sustaining an international research network.⁴⁹ The fact that members of the Tanzanian scientific community objected to the shifting of the balance from epidemiological activities to the improvement of health systems is significant for those accounts which present interventions against single pathologies as a colonial reflex. While for the SDC staff, health systems research was more adequate because they assumed a more direct benefit for the local population, African researchers prioritized the fight against some major scourges not least because it facilitated access to the global scientific community, to research grants and scientific journals.

46 Ibid., External Evaluation of the Kilombero Health Research and Support Project. Mandated by: SDC, East Africa Section, Berne, Switzerland. Draft, Dar es Salaam April 1993, pp. 1–52, here: pp. 17–18.

47 Ibid., p. 25.

48 Ibid.

49 Ibid., anonymisiert, RE: Preliminary Comments on the Draft Report on External Evaluation of the Kilombero Health Research and Support Project, 26.05.1993, pp. 1–3, here: p. 2.

**New Ideologies, New Actors, New Instruments. Essential National Health Research (ENHR)
and the Research User Fund**

The point of lingering too exhaustingly on one evaluation report is not to answer the question of whether the criticism uttered on the work of the IC was justified or not. In fact, as we have seen, from the early 1980s onwards, the STIFL researchers not only enhanced collaboration with district and regional health authorities. The work accomplished at the field laboratory in the training of VHW or chloroquine resistance, very much influenced Tanzanian national health policy making. The point here is more that the report marked a watershed in the relationship between SDC, which favored a development approach that was more or less entirely directed toward the “*up-bringing*” of the rural dwellers, and a biomedical research institution that was indeed concerned with strengthening the district health system but which had to meet the expectations of a more diverse clientele. The then director of the STI, Antoine Degrémont, explicitly expressed this point in his reaction to the evaluation saying that

*“We are especially disappointed that the evaluators only considered the center’s impact at the level of the population and on the district’s health services; this is in our opinion not pertinent because we are talking about a research center and therefore the evaluator’s focus only reveals half the truth at best.”*⁵⁰

Even though SDC always underscored that the evaluation did not reflect the opinion of the development cooperation per se, many of its members welcomed it as a trigger for fundamentally reframing Swiss development activities in the district.⁵¹ The changes that were initiated occurred at all institutional, conceptual as well as policy levels and were of

50 Documents Marcel Tanner (DMT), SDC-TZ, Antoine Degrémont to Erwin Bânteli (SDC), Concerne: External Evaluation of the Kilombero Health Research and Support Project. Final Report of June 1993, 27.08.1993, pp. 1–2, here: p. 2, for further reactions on the external evaluation see: (ASTI), Unbeschriftet, Cyril Pervilhac to Michel Mor-dasini (SDC), REF. External Evaluation of the Kilombero Health Research and Support Project, 14.08.1993, pp. 1–5 and (ASTI), Kihere File 1993, August-October, Phase V, Marcel Tanner, Comments on: Final Report of the External Evaluation of the Kilombero Health Research and Support Project (KHRSP), 20.08.1993, pp. 1–8.

51 (BAR), E 2025 (A), 2002/145, 803, t.311-Tansania.45, Recherches médicales au SWISS TROPICAL INSTITUTE FIELD LAB. à Ifakara, Bd. 8, 1993, anonymized, Planning for Calendar Year 1994, KOBU Tanzania: Health Sector, 15.10.1993, pp. 1–2, here: pp. 1–2.

paramount importance for the future outlook of the IC in the context of Swiss decolonization. SDC's major impression about the research activities undertaken so far was that the priority setting, as well as the actual scientific performance in the district, was still too much the monopoly of the Swiss scientists. In order to alleviate this situation and to render biomedical research more "demand" instead of "offer"-driven, SDC adhered to the idea of establishing a "research user fund" in which "policy makers as well as implementers should have more say on types of research to be undertaken." (sic)⁵² The research user fund was said to reduce the gap between research and implementation to a minimum. The proposition was that the policy makers themselves would come up with research proposals that were then addressed by the scientists. Former NIMR director Kilama gave a concrete example:

"You may say, ok, a women goes to a hospital or to a health center and they say, ah, you are coming to deliver so give us money to buy gloves, give us money to get clean water – well maybe not clean water, but you know [...] thinks of that nature, so the hospital says we are not charging them so it was thought that policy makers would come up with areas of policy they would like to be addressed in the research. It was thought that decision makers could come up with problems they say, ok, I am a decision maker, it has something to do with money, maybe it has something to do with personnel and how to allocate them and so on, there are problems here, you sit and then you come up with a proposal made by the decision maker sitting with researchers to come up with a proposal and both are now going to be researchers."⁵³

In its organizational set-up, the research user fund was placed within the NIMR structure and fed by different donors whose money was administered by a board. As one of the consequences of the this new instrument, SDC continuously withdrew its core funding of the IC and channeled support to the NIMR-based research user fund, meaning that the

52 (BAR), E 2025 (A), 2002/145, 802, anonymized, Position on Key Issues Concerning Future Planning Exercise for the KHRSP as per the Evaluation Report, 03.11.1993, pp. 1–3, here: p. 2.

53 Interview with Wenceslaus Kilama, 09.02.2011.

ic had to diversify its range of donors.⁵⁴ In the eyes of the SDC, this new set-up was not only meant to more democratically distribute the decision-making procedures in scientific research among different stakeholders, it was furthermore assumed that it would be a decisive achievement in helping Tanzania proceed towards what was labeled “*Essential National Health Research*” (ENHR). In its highly influential report “*Health Research. Essential Link to Equity in Development*”, in 1990 the COMMISSION ON HEALTH RESEARCH FOR DEVELOPMENT propagated ENHR as a new strategy to lighten the developing countries’ “*burden of disease*.”⁵⁵ The Commission was constituted in 1987 as an “*independent international initiative*” and two-thirds of its members originated from “*developing countries*.”⁵⁶ The Commission presented its findings as if they had risen like a phoenix. No mention of the complexities, the achievements and the failures of past research initiatives in sub-Saharan Africa or other world regions. Scholars such as Debabar Banerji unmasked the absence of the “*people*” in the report as an indicator of the Commission’s attempt to make them [the people] forget about the “*unrealistic*” dreams” of Alma Ata.⁵⁷ Without foisting the wish to camouflage the ideas of Alma Ata on the Commission, it is possibly right to say that the acronym ENHR was not born with a revolutionary zeal. On the one hand, the concept stressed the importance of a collaboration of scientists, policy-makers and the local community in engaging in country-specific health issues, as well as the role of Third World countries as trial sites for medical research: “*Many aspects of global health research must be carried out in the field conditions of developing countries such as trials of new vaccines for tropical diseases and tests of nutritional supplements*

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- 54 (DMT), SDC-TZ, Swiss-Tanzanian Development Cooperation – Annual Programme 1995, p. 1, (AIHI), Unbeschriftet, Minutes of the Consultation Meeting Between SDC and Ministry of Health on Policy Key Issues Regarding the Future Planning of the Kilombero Health Research and Support Project (KHRSP) held on 03.12.93, pp. 1–7, here: p. 3. With Spanish institutions (Spanish Ministry of Foreign Affairs, Catalan Government, Medicus Mundi Catalunya and the Hospital Clinic i Provincial, Barcelona), the Ifakara Centre was able to attract a new donor and to enter a long-lasting scientific collaboration especially in the fields of malaria vaccine research and health systems research, see: (ASTI), KIHIRE File 1994, 15. Dezember–20. März, Phase V, Pedro Alonso, Constanza Alberti, Contribution of Spanish Institutions to the Ifakara Centre, 08.03.1994, pp. 1–11, (BAR), E 2025 (A), 2002/145, 803, Bd. 8, Kilombero Health Research and Support Project, Minutes of the 4th Steering Committee Meeting of 22nd September 1993, in Dar-es-Salaam, 26.10.1993, pp. 1–38, here: p. 8, (AIHI), Unbeschriftet, Ifakara Centre Health and Research Support Project, Phase VI (July 1. 1994–June 30. 1997), Project Document Version of 21.02.1994, prepared by Ifakara Centre, p. 6.
- 55 Commission on Health Research for Development (ed.), *Health Research. Essential Link to Equity in Development*, New York 1990, for the „burden of disease” approach, see: Christopher Murray, Alan Lopez (eds.), *The Global Burden of Disease. A Comprehensive Assessment of Mortality and Disability from Diseases, Injuries and Risk Factors in 1990 and Projected to 2020*, Cambridge 1996.
- 56 Debabar Banerji, Report of the Commission on Health Research for Development and the Countries of the South, in: *International Journal of Health Services*, Vol. 22, No. 1, 1992, pp. 169–177, here: p. 170.
- 57 *Ibid.*, p. 169.

such as vitamin A.”⁵⁸ On the other hand, the authors were convinced that the developing countries should contribute more fundamentally to what they called “global health” problems. Once again in the report’s prose: “[...] studies of the rapidly growing problems of diabetes, coronary heart disease, hypertension, and cancer in selected populations in developing countries could provide unique insight into the determinants of these chronic diseases and lead to preventive measures of benefit worldwide.”⁵⁹

Adopting a concept that could neither conceal its political interests nor its ahistorical foundations, SDC at least partially undermined its enthusiasm for Health Systems Research that lay at the center of the evaluation of 1993.⁶⁰ ENHR did not prioritize one research approach over another, and programs that had biomedical investigations at their center were very much in line with ENHR ideology. For the history of health research and health care provision in Kilombero district, Switzerland’s propagation of ENHR – together with the above-mentioned re-allocation of funds from SDC to NIMR instead of to IC – was important because it led to a division of work between SDC and the IC and to a tectonic shift in the institutional setting of health promotion in Kilombero district. This was expressed in the 3rd Steering Committee meeting held in Dar es Salaam in spring 1993 which concluded that the further activities of the IC “will probably continue under more biomedical oriented research [...] and the strengthening of District Health Services more HSR oriented, and more SDC supported.”⁶¹

SDC’s attempt to re-invent district collaboration and to curtail IC’s political influence on the DHMT sailed under the programmatic title “Kilombero District Health Support” (KDHS), which replaced the KIHRE project in 1991.⁶² As an executing agency, SDC relied on the in-depth knowledge of the SCHWEIZERISCHER KATHOLISCHER MISSIONSÄRZTLICHER VEREIN, by then going under the less unwieldy name of SOLIDARMED. SOLIDARMED’s contribution to the history of Kilombero’s health services to date was restricted to recruiting Swiss physicians to ST. FRANCIS HOSPITAL but the organization had no experiences in conducting health projects whatsoever. Nonetheless, SOLIDARMED’s new tasks were far from being unambitious. Among other things it was assumed that SOLIDARMED would assist the DHMT in the

58 Health Research. Essential Link to Equity in Development, p. 85, (BAR), E 2025 (A), 2002/145, 803, Bd. 8, Council on Health Research for Development, Essential National Health Research, p. 1.

59 Ibid., p. 21.

60 (BAR), E 2025 (A), 2002/145, 803, Position on Key Issues, pp. 2–3.

61 (BAR), E 2025 (A), 2002/145, 802, Minutes of the 3rd Steering Committee Meeting. Dar-es-Salaam, May 5th 1993, Draft May 29th, 1993 Version, pp. 1–12, here: p. 5.

62 (AIHI), SDC, Agreement between the Swiss Federal Council and the Government of the United Republic of Tanzania concerning Kilombero Health Research and Support-Project, Draft, 25.09.1991, pp. 1–15.

drawing up and implementation of the district health plan, as well as establishing close links to the community, while the IC would act “as a collaborator that provides assistance through action research and health systems research.”⁶³ The new arrangement equally afforded an expansion of the competences of the steering committee (SC), which was no longer in charge of the overall policy of the IC alone but also included SOLIDARMED’s district support, as well as the research user fund.⁶⁴ The working of the new arrangement was put to test during 1994 when the different Swiss and Tanzanian institutions worked towards the establishment of a district health plan. Considerable time was invested in an assessment of the performance of the district’s health system for “the DHMT did not have a clear and up to date picture regarding the various components of the health care delivery system at each of the health facilities in the district.”⁶⁵ The baseline assessment report echoed the same bleak picture as several writings before: the community health situation was considered as generally poor, people suffered from major communicable diseases, as well as poor sanitation and the health facilities lacked the most basic drugs. Not surprisingly then did the community have a “negative image of the health services provided by the health facilities in the district.”⁶⁶ However, the open question was whether the changes within the organizational setting of Swiss development aid that occurred in 1993 could make a difference in the health care provision of Kilombero district and whether SOLIDARMED would easily develop into the district support institution, as it was supposed to. In mid-1995, there was considerable doubt among SDC collaborators themselves whether the decision to replace the expertise of STI/IC’s public health specialists by SOLIDARMED, whose members were traditionally always more active in the field of curative medicine, was exceptionally wise. It is worth quoting one member of SDC in full length:

“The IC (STI) has clearly formulated its willingness to play a new role. The DHMT however is somewhat irritated because it does not know what will replace IC’s support– a support that has been experienced as ambivalent (benefits of a close supervision which in turn is characterized by strong dependence). SolidarMed considers itself as the institution which will support the DHMT in the future but during the workshop it did not leave the impression that it is able to do so. The informal gatherings after the workshop showed that SolidarMed still lacks conceptual thinking. The changes in the relationship between IC-DHMT

63 (ASTI), KIHARE File 1994, 21. März-30. Juni, Phase V, Markus Frei, Vera Kücholl, Draft. Kilombero District Health Support (KDHS) Vision 2000, 09.06.1994, pp. 1–5, here: p. 3.

64 (ASTI), Kihere File 1993, Marcel Tanner, Comments on: Final report, p. 8.

65 (BAR), E 2026 (A), 2005/9, 861, t.311-Tansania.69, Kilombero District Health Support (KDHS), Bd. 1, 1993–1994, Planning for the Planning Process for the Proposed Kilombero District Health Plan, p. 1.

66 Ibid., Bd. 2, 1994, Kilombero District, District Health System, Baseline Assessment Report, September 1994, p. 3.

*from an engrossing assistance to a relationship whereby the DHMT appears as the principal, requires that the DHMT articulates its needs, formulates clear instructions and is able to monitor the execution. It is however clear that considering the existing capacities it would still need assistance. From an organizational point of view it is reasonable that this assistance is no longer provided by IC. SolidarMed would be a suitable institution to do so (Knowledge of the environment, integration of St. Francis) [...]. The workshop and the meetings with SolidarMed however raised some questions as to whether SolidarMed is really aware of this situation and whether it can provide the necessary "input."*⁶⁷

In addition to SOLIDARMED lacking a conceptual framework, there was a huge amount of inconsistency between the development concepts of the DHMT and that of the Swiss protagonists. According to SOLIDARMED, "community participation" was a concept not "very well understood" by the DHMT and even "objected to." Furthermore, "when it became clear that more cars and allowances for the DHMT [...] were not a priority of the KDHS, enthusiasm dropped even more."⁶⁸ The DHMT's wish list, on which the procurement of vehicles, or the electrification or renovation of health centers ranged prominently, is however not a material sign of "misconceived" development but an expression of the still precarious macro-economic situation with which the district and the entire country had to struggle. Thus, while the institutional setting of Swiss development aid changed fundamentally during the late 1980s and the beginning of the 1990s, the economic situation still threatened the sustainability of the projects undertaken. Drawing from a similar source of argument as in the 1980s, one project document in 1995 therefore stated that "the macro-economic situation in Tanzania makes it difficult to achieve sustainability particularly in the health sector."⁶⁹

67 Ibid., Bd. 1, anonymized, Kilombero District Health Support Workshop. Ifakara 26.-28. Januar 1994 (Ergänzung zum Missions-Bericht (Vertraulich), pp. 1-2, here: p. 2.

68 Ibid., Bd. 2, 1994, anonymized, Letter SolidarMed to SDC, 06.11.1994, pp. 1-2, here: p. 1.

69 (BAR), E 2025 (A), 2000/253, 9, t.311-Tansania.69, Abk. CH/Tansania betr. "The Kilombero District Health Support" – Phase I, 1994–1997, Kilombero District Health Support. Phase 1, 1 July 1995– 30 June 1997. Project Document. Final Version, 31.05.1995, pp. 1-21, here: p. 2.

THE END OF THE “PACTE COLONIAL.” SCIENTIFIC DISCONNECTS AND THE “AFRICANIZATION” OF THE CSRS IN CÔTE D’IVOIRE

The period of structural adjustment was a crucial watershed in the history of the CSRS too. NESTLÉ had left the CSRS with a bitter-sweet legacy; a new laboratory building and new prospects of nutritional research which were increasingly tackled in collaboration with the ETH Zürich, on the one hand, and a kind of sensation that Africans should in one form or the other participate in the CSRS’s scientific activities. “NESTLÉ has transformed the CSRS too quickly into a big enterprise,” one CSRS member complained.⁷⁰ The question of “Ivoirisation” of the CSRS became the major discourse at the beginning of the 1980s and rather than being transported into a technical language of professionalization and scientific competence of Africans, it was waged in overtly moral tones. The ways of “how Africans digested the legacies of colonialism” was of course not specific to the CSRS but part of a much broader social process that transformed social and public life in Côte d’Ivoire during the 1970s and 1980s.⁷¹ By the end of the 1980s all the higher levels of the civil service were in the hands of Ivoirians or Africans, leaving only a handful of French “technical advisors” in key ministries.⁷² Contrary to what we have seen in the case of the STIFL in Tanzania, the members of the CSRS could never assume an active role in positioning the center within a changing political and scientific landscape. In analogy to what has been shown in the previous chapters, the fate of CSRS was closely tied to the history of ORSTOM which abruptly ended with the expulsion of the whole scientific crew from the site in 1988. It were these external “shocks” which the CSRS could do nothing but react to and which forced Swiss science to collaborate more thoroughly with Ivoirian institutions. In order to retrace the argument, it is important to briefly hint at the character of the Franco-Ivoirian scientific complex as it emerged in the 1970s.

SHIFTING ALLIANCES: RE-FRACTURING THE FRANCO-IVOIRIAN SCIENTIFIC COMPLEX

In 1971, the MINISTÈRE DE LA RECHERCHE SCIENTIFIQUE was inaugurated with the ORSTOM-trained botanist Guédé Lorougnon as its head. During their first years in office, Lorougnon and his collaborators not only aimed at defining a sound science policy for the country but to shift decision-making power from the various French research institutions under the roof of the new ministry.⁷³ Looked at from a comparative angle, the country’s

70 (SCNAT), Depot Burgerbibliothek Bern, GA SANW 825, Sitzungen der Kommission CSRS, 1951–1990, Hansjörg Huggel, Protokoll – Kommissionssitzung vom 22. Februar 1986, 20.03.1986, pp. 1–5, here: pp. 3–4.

71 Patrick Chabal, *Power in Africa. An Essay in Political Interpretation*, London 1992, p. 201.

72 Richard C. Crook, *Politics, the Cocoa Crisis, and Administration in Côte d’Ivoire*, in: *The Journal of Modern African Studies*, Vol. 28, No. 4, 1990, pp. 649–669, here: p. 652.

73 Archive Ministère de la Recherche Scientifique Côte d’Ivoire (AMRSCI), Balla Keita, 05.02.1975, pp. 1–33, here: p. 4.

scientific system was rather exceptional because it rested on a sound “*système de programmation*” that guaranteed the exchange of information, the coordination of the research within a wider national policy context (especially with the development initiatives of the planning ministry) and defining national research priorities. Notwithstanding all the new vigor, Ivoirian scientific aspirations in the 1970s remained agriculturally biased, notoriously under-financed, and highly influenced by French “*experts*.” For instance, of the over thirty “*program commissions*” that existed in 1975, through its centers, ORSTOM “*participated*” in all and coordinated three of them.⁷⁴ The execution of French scientific projects was barely restricted, not least because French science fell under the general convention about development aid signed in April 1962 and thus left the valuable impact of French science on Ivoirian development undisputed. Ongoing dependency found its clearest expression in financial matters. In 1973 the two parties convened that scientific activities that were motivated largely by French interests were covered by France; expenditures for programs with a joint interest were shared by France as well as Côte d’Ivoire and funds for programs which the Ivoirian government asked their French allies to pursue were raised by the former.⁷⁵ Until the signing of the “*accord cadre*” in 1984, France disbursed the lion’s share of the budget to ORSTOM and GERDAT (“*groupement d’étude et de recherche pour le développement de l’agronomie tropicale*”), only very haphazardly considering national research institutes.⁷⁶ As a consequence, Ivoirian policy-makers faced severe constraints in building up a “*national*” scientific infrastructure. Apart from financial issues, the question of “*Ivoirisation*” was a second field where the legacies of French colonialism became most feasible. The question of the extent to which young Ivoirian scholars would be able to work within French research institutes was a topic that dominated negotiations between the two parties throughout the 1970s and 1980s. The Ivoirian government did not necessarily pursue the policy of replacing French scientists with African personnel. Rather, the idea was that promising scholars should be trained by senior French scientists under specific programs, so that “*their former comrades (under colonial times) are becoming their friends now.*”⁷⁷ As far as ORSTOM was concerned, France never embraced this form of friendship whole-heartedly. Answering the pressure emerging from the labor market, ORSTOM’s director in Côte d’Ivoire, J.P. Tonnier offered his opinion that the institute should create a legal “*parallel structure*” as soon as possible, in order to prevent Ivoirian scientists – considered as mere “*technicians*” anyway – adorning

74 Ibid., Bernard Pouyaud et al., Rapport sur les activités, la situation matérielle et sociale et les relations extérieures de l’ORSTOM en Côte d’Ivoire, établi à la demande de Monsieur le Ministre de la Recherche Scientifique [undated], pp. 1–12, here: p. 7.

75 Ibid., Commission Mixte Ivoirio-Française de concertation en matière de recherche scientifique et technique, Abidjan, 29–31. Mai 1973, pp. 1–7, here: p. 6.

76 Ibid., Dixième Commission mixte Franco-Ivoirienne en matière de recherche scientifique et technique, Abidjan 7.-9. Mars 1983, pp. 1–4, here: p. 3.

77 (ANF), ARCHIVES DE L’ORSTOM, 19900236, Art. 57, M. Gleizes, [untitled and undated], pp. 1–9, here: p. 7.

themselves with the label “ORSTOM.”⁷⁸ This way of reasoning met with the approval of ORSTOM’s director general, Guy Camus, who in a letter to Tonnier in 1978 insisted on the small but far-ranging difference between “*embedding*” (encadrement) and “*insertion*.” While the former, signifying the training and formation of a restricted number of Ivoirians, was politically unpreventable, permanent “*insertion*” had to be avoided by all means.⁷⁹ Not surprisingly, the recruitment of Ivoirian scholars to ORSTOM remained far below Ivoirian expectations.⁸⁰ The fragile bonds of friendship the term “*Ivoirisation*” entailed were torn apart in the second half of the 1980s. The major event in this matter was the signing of the above-mentioned “*accord cadre*” in 1984, wherein the two parties agreed on the “*souveraineté et la propriété de la Côte d’Ivoire sur les bien fonciers et immobiliers de toutes les structures de recherches françaises en Côte d’Ivoire*.”⁸¹ In the following, France withdrew its financial contribution to scientific research in the African country and in analogy to what happened in Tanzania in the middle of the 1960s, the Ivoirian government more rigorously entered new relationships with potential donor countries.⁸² The fissures in scientific relations, the first signs of which became detectable in the accord cadre and which finally culminated in the ungentle expulsion of the entire ORSTOM crew in 1988, sparked off new possibilities for the CSRS. The accord cadre undoubtedly made clear that foreign – non-French – scientific bodies were not affected by the processes of nationalization.

“Foreign, non-French scientific structures ranged beyond the movement of regaining control of French institutions by Côte d’Ivoire. For instance, the Centre Suisse de Recherches Scientifiques (CSRS) [...] was not troubled when ORSTOM in Adiopodoumé and the specialized centers of the CIRAD [...] were brought under control of the Ivoirian government.”⁸³

78 Ibid., J. P. Tonnier, Principaux problèmes en suspens. Note remise à M. Gleizes à l’occasion de sa mission en Côte d’Ivoire, 15.05.1975, pp. 1–4, here: p. 3.

79 (ANF), ARCHIVES DE L’ORSTOM, 19910536, Art. 8, Côte d’Ivoire, 1971–1978, Guy Camus, “*personnelle et confidentielle*”, 08.05.1978, pp. 1–3, here: p. 1.

80 In 1980, there was but only one Ivoirian researcher working under ORSTOM, see: (AMRSCI), Bernard Pouyaud et al., Rapport, p. 3.

81 (AMRSCI), Accord Cadre relatif à l’aide et à la coopération en matière de recherche scientifique entre le Gouvernement de la République de Côte d’Ivoire et le Gouvernement de la République Française, 25.04.1984, p. 2.

82 Ibid., Traore Kassoum, Histoire de la Recherche Scientifique en Côte d’Ivoire, p. 31.

83 Ibid., Hubert Oulaye et al., États Généraux de la Recherche: Rapport de la Commission “*Cadre Juridique et Institutionnel*,” 1999, p. 14.

**STEPPING OUT FROM UNDER THE COLONIAL SHADOW.
THE CSRS AND THE QUEST FOR “AFRICANIZATION”**

Even though Switzerland was exempt from the historical sensitivities pervading the negotiations between France and Côte d’Ivoire, the latter’s quest for reclaiming the ORSTOM land had direct consequences for the CSRS because it also affected the land on which the CSRS was built.⁸⁴ Thus, while for over thirty years, the CSRS was covered by the political shade cast by the powerful French neighbor, for the first time the turn of the decade brought Switzerland in direct contact with the Ivoirian government. Already in 1978, financial constraints of the CSRS and the new political realities drove a Swiss delegation composed of members of the SNG as well as SNSF to Abidjan to get a clearer picture about the actual situation and the future possibilities of the research site and to find out about whether the Ivoirian government was in favor of Swiss research in the country. Most importantly, the delegation met with the minister for scientific research, Lorougnon, who assured them that he would regret the CSRS closing its doors. Rather, the minister asked the Swiss party to play a stronger role within the Ivoirian research policy in order to establish a counterweight to France’s predominant role in Ivoirian scientific politics.⁸⁵ Given Lorougnon’s favorable opinion and the many research possibilities the country offered, the delegation proposed the continuation of the research station for three years until the end of 1982 but with a shifting of priorities. Instead of being a station that mainly serves Swiss interests, it should now be guided by the following principles:

- a) Swiss research contributing to national and regional problems
- b) Training of Ivoirian technical and scientific personnel
- c) Training of young Swiss natural scientists in tropical research and as leaders of a scientific institute
- d) Provision of working space und housing for Swiss scientists who want to conduct research projects in the tropics and/or complete their training.⁸⁶

84 (ASTI), CSRS, Adresses, Commission, Principes, Centre Suisse de Recherches Scientifiques en Côte d’Ivoire (CSRS), Wichtige Beschlüsse des Senats der SANW, welche das Zentrum an der Elfenbeinküste betreffen und Auszüge aus den dem Senat vorgelegten Berichten über das Centre, pp. 1–7, here: p. 3.

85 (SCNAT), Depot Burgerbibliothek Bern, GA SANW 448, Senat, 1977–1984, Bericht der Delegation SNG/NATIONAL-FONDS (SNF) über den Besuch am CENTRE SUISSE DE RECHERCHES SCIENTIFIQUES (CSRS) in Adiopodoumé (Elfenbeinküste) vom 23.-25.11.1978, p. 71.

86 Ibid., p. 74.

In addition to these principles, Swiss research should no longer be determined by the interest of single Swiss researchers but take place within previously agreed research programs matching local priorities such as parasitology, botany or ethology (primatology). In 1979 the Senate of the SNG accepted the propositions of the delegation to continue the activities in Adiopodoumé. Of the overall budget of CHF 230'000, the SNG should provide at least CHF 100'000 while the rest should be supplied by other sources.⁸⁷ Similar to what happened at STIFL in Tanzania, the policy-makers of the CSRS also requested funds from the government development agency and similarly, the SDC brought a new dynamic into Swiss-Ivoirian relations. The money released by SDC for the period 1979–1982 was said to foster scientific collaboration with the Third World and to build up an independent scientific infrastructure. Furthermore, the financial means should allow the CSRS to explore the possibilities of a closer collaboration with the research ministry and the university institutes. Especially, it should investigate how African researchers could be engaged in the research activities of the CSRS.⁸⁸ One year after the agreement between the SNG and SDC, Christian George, a zoologist from the University of Lausanne was sent on duty mission to Côte d'Ivoire to explore the prospects for a closer attachment of young Ivoirian researchers to the laboratory. His investigations did not yield very far-reaching results: One parasitological student proposed by the new research minister Balla Keita could not be integrated into the CSRS because no parasitologist worked at the Swiss research station at that moment. Further, the candidate elected for a research stay in Switzerland could finally not travel because the grades in his final exams were not all too satisfying.⁸⁹

One of the first to propose a comprehensive plan for the “Ivoirization” of the CSRS was Marc Bachmann, a nutritionist based at the ETH Zurich and president of the commission for the CSRS. Bachmann considered a long-term strategy leading to complete Ivoirization after several stages. In a first step, the government of Côte d'Ivoire should be convinced to contribute to the running costs of the CSRS and to offer “*some few scientists*” the possibility of participating in the current research projects. In a second phase, the financial contribution by the government should be increased and the first Ivoirian projects initiated. According

87 (SCNAT), Depot Burgerbibliothek Bern, GA SANW 457, CSRS 1974–1984, Rudolf Weber, Beat Sitter, Begründung zum Antrag auf Weiterführung des Centre Suisse de Recherches Scientifiques an der Elfenbeinküste, 17.05.1979, pp. 1–8, here: p. 2.

88 (SCNAT), Depot Burgerbibliothek Bern, GA SANW 448, Senat, E. Niggli, Senatsprotokoll der 75. Senats-Sitzung der Schweizerischen Naturforschenden Gesellschaft, pp. 1–85, here: p. 30.

89 (BAR), E 2200.5 (-), 1998/4, 13, 652.2, Associations et institutions scientifiques, 1985–1988, Rapport sur l'enquête effectuée en Côte d'Ivoire par le Dr. Ch. George (résumé des activités), pp. 1–4, here: p. 3.

to Bachmann's plans, this phase would also witness the arrival of a "suitable Ivoirian", who as a co-director would be in charge of the internal matters of the CSRS. In a final and third phase the overall leadership of the CSRS would be handed over to the Côte d'Ivoire while some small financial contributions still remained with Switzerland.⁹⁰

Not surprisingly, Bachmann's propositions met fierce resistance amongst other members of the commission. Most of them agreed that the political pressure was too high to totally oppose a broader Ivoirian participation. As Aeschlimann put it in alarming tones: "if we don't make the first step ourselves, the Ivoirians will make a big one, which could be definitive."⁹¹ But still it was a long way from accepting to train African students to complete Ivoirization as envisaged by Bachmann. More than anything, the question of Ivoirization was a question of scale. In the meeting held on 16th February 1985, the commission agreed that they would resist a) an Ivoirian co-director b) losing their academic freedom c) pushing Ivoirization without a clear plan d) a financial disaster and e) an Ivoirization to 100%.⁹² As these elements indicate, the Ivoirization debate rather exemplified what should be prevented than in which direction effectively to embark on. Furthermore, the whole discussion was held in moral undertones. While in Tanzania the term "Tanzanization" never showed up in the sources but was instead camouflaged behind the more "technical" and seemingly "apolitical" notion of "integration," the persons responsible for the CSRS never hesitated to consider the adverse effects of African influence on the "quality" of Swiss knowledge generated in Côte d'Ivoire. Musing about new forms of collaboration, Eugen Wimmer – the driving force of the CSRS since its humble beginnings – evoked the specific life-styles of Africans (*manière de vivre*) and their "anti-individualism" which were likely to undermine the lab's financial independence. "In general," Wimmer contended, "he [the African] lives together with his parents and if he finds himself in a situation to aid and abet them he will certainly do. This attitude could be called "family parasitism."⁹³ Leaving aside the issue of what was perceived as corruption, others interpreted the prospect of "Ivoirization" more generally as the decay of scientific infrastructure or as a process at the end of which only remnants of a former glorious past would be detectable. One of the former directors of the CSRS evoked the familiar trope of once burgeoning research sites becoming the archaeologist's paradise:

90 (SCNAT), Depot Burgerbibliothek Bern, GA SANW 830, Marc Bachmann, Gedanken zu einer eventuellen Mitbeteiligung ivoirianischer Forscher an den Arbeiten des Centre Suisse, pp. 1–2.

91 Ibid., André Aeschlimann to Marc Bachmann, 22.02.1985, p. 1.

92 (SCNAT), Depot Burgerbibliothek Bern, GA SANW 825, Hansjörg Huggel, Procès-Verbal de la Commission du CSRS du 16.2.1985, pp. 1–7, here: p. 6.

93 (SCNAT), Depot Burgerbibliothek Bern, GA SANW 830, Eugen Wimmer, Ivoirisation du Centre Suisse, [undated] p. 1.

“The prospect of a complete Ivoirisation makes me sad. In Niger, Burkina Faso and Mali I saw the remains of totally run-down scientific facilities that were built up in full enthusiasm. Former NESTLÉ scientists who once again visited Kpouébo – their model village – told me about the total failure of their development programs. Obviously also the commitment of sociologists and psychologists did not help very much here. In September 1985 I visited the former French research station Lamto which is now administered by the University of Abidjan. The formerly flourishing station is almost completely orphaned today. It was desperate! That is why Ivoirisation should not be an aim but something that has to be delayed as much as possible.”⁹⁴

However, outside changes were accelerating too quickly for the delaying of Africanization to be a suitable strategy. In the second half of the 1980s, the murky fate of ORSTOM continued to bother the managers of the CSRS. At the second conference of the “*Francophonie*” held in Québec between 2nd and 4th September 1987, the delegates decided about the transformation of ORSTOM Adiopodoumé into the INSTITUT INTERNATIONALE DE RECHERCHE SCIENTIFIQUE POUR LE DÉVELOPPEMENT D’ADIPODOUMÉ (IIRSDA). Heralded as the first international francophone research institute south of the Sahara, the IIRSDA should engage in agricultural and biomedical research as the major areas of investigation. As often happens in the process of reconfiguring research structures, there are elements more prone to change than others. Of the latter was the decision to nominate the former ORSTOM director, Bernard Boccas, as new director general of the IIRSDA, albeit accompanied by an Ivoirian co-director.⁹⁵ Decision-making rested in the hands of an administrative body (conseil d’administration) made up of delegates from different countries and a “*donors committee*” (comité des donateurs”) where also non-state actors could exert influence over the scientific programs. The Canadian, French and Ivoirian governments who actually constituted the IIRSDA were of course eager to draw in as many new donor countries as possible. Not surprisingly from a linguistic, financial and historical point of view, Switzerland was one of their prime targets.

Observing the stepwise internationalization under the roof of France’s once giant scientific machinery, the SNG had to carefully maneuver between the political pressures exerted by France and Côte d’Ivoire and to negotiate its own independent legal status which since

94 Ibid., anonymisiert, 03.1985, pp. 1–4, here: p. 2.

95 (ASTI), CSRS, Adresses, Commission, Principes, Beat Sitter, André Aeschlimann, Bericht, Vereinbarung zwischen der Regierung der Republik Elfenbeinküste und der SANW betreffend das Centre Suisse de Recherches Scientifiques en Côte d’Ivoire (CSRS), 24.08.1988, pp. 1–9, here: p. 8.

1985 had been suspended in mid-air. In 1988, the SNG and the Ivoirian government put their signatures under a “*protocole d'accord*”, which contained both freedoms and obligations. Generally, future scientific programs executed at the CSRS should be integrated into the “*système de programmation*” or at least be approved by the ministry; furthermore, the ministry reserved the right to authorize the import and export of the scientific material and to delegate a number of Ivoirian scientists working at the CSRS as research associates. On the other hand, the Ivoirian government provided the land on which the CSRS was built for free and offered generous tax exemptions for the import of scientific devices and infrastructure.⁹⁶ During the negotiations of the *protocole d'accord*, the Ivoirian delegates made it once again clear that they would expect a Swiss participation in the newly established IIRSDA.⁹⁷ From a scientific perspective, such collaboration was far from fallacious. Some of the CSRS's key expertise such as taxonomy, parasitology or soil science was largely absent on IIRSDA's research agenda. The major problem was that the SNG, as a non-governmental body, could only participate in the donors committee but not as full member in the *conseil d'administration*. However, SNG's attempts to motivate the Swiss government to make a step in the direction of Switzerland's official adherence to the IIRSDA were not crowned with success. While Flavio Cotti, member of the Swiss government, remained uncommitted vis-à-vis official invitations from the Ivoirian government, the SDC's position did not lack clarity: Côte d'Ivoire did not range amongst the SDC's focus countries, its economic situation had deteriorated to such a degree that it was not a “*good choice*” for embarking on further activities and as far as the areas agriculture and health were concerned, the SDC preferred to channel their funds to the CGIAR (Consultative Group on International Agricultural Research) or to WHO's tropical disease programs.⁹⁸ In this light, the SDC's credit mentioned above covering a period of three years was nothing more than a piecemeal-solution.

96 (SCNAT), Depot Burgerbibliothek Bern, GA SANW 829, Auguste Kouassi, Beat Sitter, André Aeschlimann, *Protocole d'accord entre le Gouvernement de la République de Côte d'Ivoire et la Société Helvétique de Science Naturelles (Académie Suisse des Sciences Naturelles) concernant le Centre Suisse de Recherches Scientifiques en Côte d'Ivoire*, 29.03.1988.

97 (ASTI), CSRS, Adresses, Commission, Principes, Sitter, Aeschlimann, Bericht, p. 7.

98 Ibid., Alassane Salif N'Diaye to Flavio Cotti, Invitation du Gouvernement de la Confédération Helvétique à adhérer à l'Institut International de Recherche Scientifique pour le Développement d'Adiopodoumé (IIRSDA), 26.04.1989, Flavio Cotti to Alassane Salif N'Diaye, Institut International de Recherche Scientifique pour le Développement Adiopodoumé (IIRSDA), 29.06.1989, Fritz Staehelin (SDC) to B. Hahnloser (EDI), Institut d'Adiopodoumé (Côte d'Ivoire), 23.08.1989, pp. 1–2.

Indeed, the idea of a well-functioning international research institute had difficulties to materialize. As it turned out, neither France, Canada nor the Côte d'Ivoire fondly supported the IIRSDA. To put it in another way, their support was more derived from political considerations than inspired by the wish for international scientific cooperation. The original intentions of the Ivoirian government was to set up an INSTITUT DES FORÊTS, in analogy to the already existing INSTITUT DES SAVANES but since France was not prepared to hand over the site in Adiopodoumé to Côte d'Ivoire, the Ivoirian government agreed on the internationalization of ORSTOM. Canada's commitment had its source in horse-trading: the country already had a professional research institute in the Côte d'Ivoire and made it clear that France could only expect Canadian commitment to the IIRSDA if the French provided financial backing to the Canadian scientific projects in turn. Critical voices could also be heard from within the MINISTÈRE DE LA COOPERATION TECHNIQUE which, according to some observers, increasingly started to question whether its political motivation was worth the effort.⁹⁹ Over the period between 1989 and 1991, scientific activities in Adiopodoumé came almost to a standstill. The Ivoirian government agreed on the decision to withdraw 75% of the French scientific personnel from the spot and saw the several laboratories closing down one after the other. New statutes and a new Canadian director general were unable to reverse this trend. In 1991 the IIRSDA had four scientists on the site and this number further decreased to one single researcher over the course of the year.¹⁰⁰ In 1995 both the IIRSDA and the former Dutch research center were closed down.¹⁰¹ Of the former colonial research institutions operating in Adiopodoumé only the CSRS remained.

Indeed, Swiss science outlived French and Dutch presence on the spot, yet it did so with different purposes. The departure of the French from Adiopodoumé and the signing of the accord cadre buried the idea that the CSRS would be the vehicle for Swiss scientists to realize any of their research interests. Instead, all activities should be placed under specific core areas that complied with the country's research priorities. In the 1990s, the axes nature/ecology, nutrition/rural development and parasitology (medicine)/rural development were defined.¹⁰² Later, the topic of urbanization and its consequences for people's health was added. This new axis especially called for a close collaboration between the natural and the social sciences.¹⁰³

99 Archive Centre Suisse de Recherches Scientifiques (ACSRS), Entwicklung IIRSDA – Stand Oktober 1989, pp. 1–3, here: pp. 1–2.

100 (ASTI), CSRS, Kommissionssitzungen 1990–1997, Rapports Annuels 1990–1996, Liliane Ortega, Rapport Annuel 1993, CSRS, Centre Suisse de Recherche Scientifique en Côte d'Ivoire, 01.02.1994, pp. 1–10, here: p. 10.

101 Ibid., R. Leuthold, Protokoll der Sitzung der Kommission für das Centre Suisse de Recherches Scientifiques, Côte d'Ivoire, 08.03.1995, pp. 1–5, here: p. 4.

102 Jean-François Graf, Kommission für das Centre Suisse de Recherches Scientifiques en Côte d'Ivoire (CSRS), in: Jahrbuch der Schweizerischen Akademie der Naturwissenschaften, Bern 1990, pp. 24–27, here: p. 24, (ASTI), CSRS, Kommissionssitzungen 1990–1997, Rodolphe Spichiger, Protocole de la séance de la Commission ad hoc du CSRS du 16.05.1990, pp. 1–4, here: p. 2, (ASTI), CSRS, Adresses, Commission, Principes, Forschungsschwerpunkte am CSRS, Planungsperiode 1992–1995, p. 1.

103 Marcel Tanner, Commission pour le Centre Suisse de Recherche Scientifique en Côte-d'Ivoire, in: Jahrbuch der Schweizerischen Akademie der Naturwissenschaften, Bern 2000, pp. 95–97, here: p. 95.

FROM IVOIRIZATION TO RESEARCH PARTNERSHIPS

The protocole d'accord of 1988 between the CSRS and the Ivoirian government was a turning point in reinterpreting the negative discourse of "Ivoirization" into the positive ideal of "research partnership", which has become such a powerful token that thinking in different categories is hardly possible today.¹⁰⁴ The protocole d'accord gave the right to the RESEARCH MINISTRY¹⁰⁵ to delegate Ivoirian scholars to the CSRS's research programs. It was especially thanks to director Peter Lehmann and the first female director of the CSRS, the botanist Liliane Ortega, that a first group of Ivoirian scholars was inserted into the different new research programs in the 1990s. Right from the beginning, Switzerland acted as the gatekeeper to partnership approaches. Two considerations, in particular, led to certain restrictions in fully exploiting the partnership idea. The first was financial in nature. The SWISS ACADEMY OF SCIENCE (as the SNG is called today) insisted that, apart from small contributions to social security coverage, the Ivoirian ministry had to account for the full salaries and the infrastructure of the African researchers. The second was the fear of losses in the quality of research results. Without having a say in the selection of the candidates, the CSRS worried about "key functions" within the CSRS's research structures being blocked by "incompetent local researchers."¹⁰⁶ This was one of the subjects of the discussion between a delegation of the SWISS ACADEMY OF SCIENCES and Ivoirian political representatives in 1991 where the Swiss party could wrench the promise from the minister that he would only send "highly qualified young researchers" who would complete their third cycle at the CSRS.¹⁰⁷ Some years later this modality was changed in favor of the CSRS. As it had been agreed now, the CSRS could select their future researchers amongst a group of most promising candidates.¹⁰⁸ That, from an institutional point of view, development took the form of promoting the Ivoirian elite, reverberated strongly in Liliane Ortega's statement that "[...] le vrai développement, c'est, quand on le peut, d'aider les meilleurs dans le pays."¹⁰⁹

104 Kent Buse, Andrew Harmer, Power to the Partners? The Politics of Public-Private Health Partnerships, in: Development, Vol. 47, No. 2, 2004, pp. 49–56, here: pp. 51–52.

105 In 1986, the MINISTÈRE DE L'ÉDUCATION NATIONALE ET DE LA RECHERCHE SCIENTIFIQUE has been divided up into a MINISTÈRE DE L'ÉDUCATION NATIONALE (ENSEIGNEMENT SECONDAIRE ET SUPÉRIEURE) with Balla Keita as its head and a MINISTÈRE DE LA RECHERCHE SCIENTIFIQUE under the leadership of Alassane Salif N'Diaye.

106 (ASTI), CSRS, Adresses, Commission, Principes, Paul Walter, Besuch einer Delegation der SANW beim Centre Suisse de Recherches Scientifiques en Côte d'Ivoire (CSRS) in Abidjan vom 9.-24. März 1991, Inoffizieller Bericht, 06.04.1991, pp. 1–12, here: pp. 5–6.

107 Ibid., p. 10.

108 (ASTI), CSRS, Kommissionssitzungen 1990–1997, Jakob Zinsstag, Maria Zinsstag, Centre Suisse de Recherches Scientifiques en Côte d'Ivoire, Rapport Annuel 1995, 08.02.1995, pp. 1–28, here: p. 17.

109 Catherine Morand, Notre institut sous les tropiques africains, in: Journal de Genève et Gazette de Lausanne, 14./15. décembre 1991.

One of the major features of research partnerships in the initial years was that the research priorities were defined by Switzerland.¹¹⁰ Ivoirian researchers had no possibilities to see their own research questions being addressed but were given a certain topic within the predefined axes. Most of them worked together with Swiss Ph.D. students who already came with elaborate research plans and financial support. It is not to argue that this modality necessarily led to interpersonal tensions between African and Swiss researchers on the ground. Rather, this constellation was impervious to Ivoirian inputs and rendered the whole partnership idea unequal. Reflecting on the very first years working at the CSRS, one of the African researchers had this to say:

“[...] in the past it was like the Swiss researcher came with a research topic and with money and it was here where he looked for support. He asked somebody to help him, another researcher or a student to support his work. So, everything was prepared there [in Switzerland]. He probably had time to think about his topic for six months or even a year and when he arrived here he had to start, he would not wait for three months to get the project started. He had to start immediately and it is now when he looked for a student. Sometimes, this student had no time to fully acknowledge the range of the work and he could not re-orient things. Matters were already difficult from the beginning [...]”¹¹¹

Disregarding their weak position in framing research proposals, for many of the first African researchers, partnership meant having access to a competitive research environment and to a research infrastructure that in the best case would enable them to pursue their academic careers. However, carving out fixed research axes did not always favor the individual career path. One researcher, for instance, who happened to write his thesis on mammals fell victim to the fact that in the process of readjusting the CSRS's research policies, traditional zoological topics had a more difficult standing.¹¹² Similarly, some research branches of the CSRS proved to be more open to African researchers than others. In particular, the internationally prestigious primatology group working in the Tai Forest under Christoph Boesch had to accept the criticism of being very reluctant to offer collaboration to Ivoirian scholars.

110 (ASTI), Adresses, Commission, Principes, Séry Bailly, Jakob Zinsstag, Compte rendu du séminaire sur le partenariat ivoiro-suisse entre l'Université d'Abidjan et le Centre Suisse de Recherches Scientifiques, jeudi, 23 mars 1994, pp. 1–3, here: p. 2.

111 Anonymized, Interview held in Adiopodoumé, 2009.

112 Anonymized, Interview held in Adiopodoumé, 2009.

TOWARDS A NEW WORLD ORDER

This chapter was an attempt to relate macro-economic processes such as the liberalization of African economies and the new transnational modalities between private and government actors in science and health care to the inner-institutional changes of STIFL and the CSRS. It hinted at a series of contradictory processes within biomedical research and development practices taking place in the context of widespread poverty. The first is the simple fact that the spiral of economic downturn, in which Tanzania has been stuck since the 1970s, very much contributed to the ascent of health care within the SDC, as well as the increased power of the STI and the IC in Ifakara. Africa's decreasing economic performance did not just usher in new forms of governmentality, with NGO's more and more assuming roles which once belonged to the core business of governments, but set an end to long-established ties altogether. As the example of the Côte d'Ivoire has shown, the period witnessed the disruption of ties between Paris and its former colony. Despite the Janus-faced character¹¹³ of French policies towards its former colonial possession still prevailing today, most historians and observers of international relations interpreted the end of the 1980s as a watershed in official French-African relations. The reasons for a policy re-orientation were rooted in economic and political considerations: with the end of the COLD WAR, Africa lost much of its former geo-strategic importance and turned France's attention towards more "profitable" and industrialized areas in Eastern Europe and Asia.¹¹⁴ Additionally, France's subordination of their development aspirations under IMF requirements in the "Abidjan doctrine" of 1993, the disastrous role played in the Rwanda genocide one year later, and general doubts about the efficiency of development aid in Africa were all signs that the "grande nation's" presence on the continent had become economically and politically unrewarding.¹¹⁵ France's shifting relations to one of its foremost closest allies in francophone West Africa – Côte d'Ivoire – is a revealing example for the process that could be described by James Ferguson as global disconnect within a world order for which connection is the very essence.¹¹⁶

113 Jean-François Bayart speaks about a "schizophrenic" nature of French African politics during the 1990s which was characterized by a subordination of France's policy under the requirement of the Bretton Woods institutions on the one hand and its continuing efforts in political stabilization which did not shrink from military interventions on the other, see: Jean-François Bayart, *Réflexions sur la politique africaine de la France*, in: *Politique Africaine*, Vol. 58, 1995, pp. 41–50.

114 Bayart, *France-Afrique. La fin du pacte colonial*, in: *Politique Africaine*, Vol. 39, 1990, pp. 47–53, p. 50.

115 Philippe Marchesin, *La politique africaine de la France en transition*, in: *Politique Africaine*, Vol. 71, 1998, pp. 91–106.

116 Ferguson, *Global Disconnect. Abjection and the Aftermath of Modernism*, in: Peter Geschiere, Birgit Meyer and Peter Pels (eds.), *Reading in Modernities in Africa*, Bloomington, Indiana 2008, pp. 1–8, for a similar argument see: Ferguson, *Transnational Topographies of Power. Beyond "the State" and "Civil Society" in the Study of African Politics*, in: Ferguson, *Global Shadows. Africa in the Neoliberal World Order*, Durham, London 2006, pp. 89–112.

These reconnects and disconnects on a global scale were feasible on the level of the micro-politics of the two institutions. Largely shaped by the state of French science in Côte d'Ivoire, the activities of the CSRS were more vehemently directed towards the African country, both from the point of view of tackling local priorities as well as including African scientists into the research program. "Ivoirization" of the CSRS was a process initially feared by the members of the CSRS and later controlled by them to large extents. To the extent to which the CSRS could choose the "most suitable" candidates for integration into the research programs of the CSRS, scientific abilities and skills became the very arbiter and essence for upward social mobility. Decolonization was by and large a socio-technical project, transforming older categories of race into claiming "the possibility of boundless upward mobility through the acquisition of technological knowledge."¹¹⁷

The "integration" of STIFL in Tanzania, too, went hand in hand with administrative reforms on the one hand and with a redistribution of responsibilities between SDC and STI/IC on the other. Dissatisfied with what had been achieved in the Tanzanian health sector, especially in the area of PHC, SDC and the STI tried to institutionalize new mechanisms in order to render medical research more demand-driven (research user fund); to redirect the flow of money from SDC more directly to the NATIONAL INSTITUTE OF MEDICAL RESEARCH (NIMR) instead of the IC; to re-invent district collaboration with SOLIDARMED and to expand the role of the Steering Committee as a private-public partnership institution now responsible for all the innovations. The changes initiated were however not long-lasting. The idea of the research user fund never did really take off. According to the former NIMR director Wenceslaus Kilama, apart from the resistance from the Tanzanian MOH, the major problem was to find research clients who would come up with research proposals. The mindset still prevalent was that policy implementers and other clients did not allow themselves to guide the work of scientists. "They said you are the researchers, you know better and we don't want to interfere with you doing a good job."¹¹⁸

What was more effective, however, was SDC's attempt to disentangle health services from scientific research, the unity of which was one of the major achievements of the KIHIRE project. Bringing SOLIDARMED into the development gamble, SDC by and large drove the health service branch towards a dead end. The IC, consequently, prospected for new donors and became a highly attractive center for excellence, especially in the realm of malaria research and vaccine development which got off the ground with the *Kilombero Malaria Project* (KMP) in 1988 and which from the 1990s gained global attention to unprecedented degrees. How malaria research took shape in Kilombero district and how it was interpreted by the local population are the topics of the next chapter.

117 Hecht, "Rupture-Talk in the Nuclear Age", p. 719.

118 Interview with Wenceslaus Kilama, 09.02.2011, emphasis added.

CHAPTER 7

Malaria

ALONG THE FEVER TRAIL¹

The previous chapter described a transition from a state where medical research was negotiated locally and discussed under the headings of “*development*” and PRIMARY HEALTH CARE (PHC) to a situation where the diversification of the global health network was more strongly guiding research practices on the ground in Tanzanian. One reason for this shift into a post-development era was the redistribution of duties between the SDC and the IFAKARA CENTER (IC), as well as the widening gap between health research and the provision of health services in Kilombero district. Yet another was a growing research focus on malaria as the main health concern in the region that started to absorb most of the IC’s scientific zeal. Apart from chloroquine-testing at ST. FRANCIS HOSPITAL undertaken by Swiss scientists, malaria has long been a research topic monopolized by Tanzanian research groups. Towards the end of the 1980s, however, the NATIONAL INSTITUTE OF MEDICAL RESEARCH’S (NIMR) monopoly on investigating the disease loosened. In an attempt to diversify its resources, in 1988 the former field lab embarked on the “*Kilombero Malaria Project*” (KMP), which had the double rationale of developing possible malaria vaccine candidates as well as evaluating Insecticide Treated Nets (ITN’s) for their widespread use by the population.² This new research agenda ushered in new modes of collaboration because, in particular,

1 I am deeply indebted to Jensen Charles and Ronald Munga for assisting me during fieldwork in Idete, Mingoyo, Mnolela and Nyengedi.

2 (ASTI), Kilombero Malaria Project, Summary of the Kilombero Malaria Project, pp. 1–2, here: p. 1. The KMP was a joint undertaking between the SWISS TROPICAL INSTITUTE (STI), the SWISS TROPICAL INSTITUTE FIELD LABORATORY (STIFL), the Dutch Universities of Wageningen and Nijmegen, the WHO-IMMUNOLOGY RESEARCH AND TRAINING CENTER (WHO-IRTC), the IMPERIAL COLLEGE in London, the TANZANIAN NATIONAL INSTITUTE FOR MEDICAL RESEARCH (NIMR) and the DISTRICT HEALTH OFFICE. The funds for the initial period for three years came from the SWISS DEVELOPMENT COOPERATION (SDC), the DUTCH GOVERNMENT and the WHO-IRTC.

the quest for a malaria vaccine was a highly competitive endeavor between different research groups around the globe.³ The renaissance of malaria research as a valuable site of investigation during the 1990s can be explained by the assumption that the burden of the disease could be significantly reduced. This time, however, not with an all-encompassing “*magic bullet*” but with a number of more or less technical and “*integrated*” approaches which in their entirety would have an impact in mitigating the devastating effects of the disease. Hence, in a similar vein to the period before African independence, health was once again perceived as the “*product of technical interventions divorced from economic, social and political contexts.*”⁴ The difference to earlier decades of malaria research, however, was striking in that from the beginning of the 1990s, the number of actors involved in malaria research rose exponentially. Malaria was (and still is) first and foremost a disease of the poor, living in countries of the Third World. But in the privileged North-Western hemisphere malaria has become a powerful icon for raising funds and gathering politicians, global charities, scientific institutions, pharmaceutical industries and national governments behind a “*new humanitarian movement*”, which perhaps more than ever considers the fight against the disease as a moral necessity.

The last chapter therefore looks at certain aspects of the history of malaria research in Tanzania, in order to grapple with a major research question which I have been carrying around for a long time and which has not yet sufficiently been addressed in the previous study: What are the possibilities and conditions for science to leave the stage of experimentation and to have an impact on the level on health policy on a national scale? I will try to answer this research question with the help of two case studies that build the core of this last chapter. Both of them deal with the organization and the power-effects of different malaria interventions in 20th and 21st century Tanzania. They do so from albeit different vantage points. The first example looks at the history of the vaccine candidate SPF66 (Serum Plasmodium falciparum Version 66). SPF66 had been produced by the Colombian scientist Manuel Patarroyo and tested in a phase-III trial in Idete, a small village in the KMP catchment area in Tanzania. The second example takes a closer look at the project on “*Intermittent Preventive Treatment of Malaria in Infants*” (IPTi), conducted in the southeastern

3 (ASTI), KIHARE Letters, 1985–1988, Antoine Degrémont to Don DeSavigny and Christoph Hatz, 18.07.1986, pp. 1–9.

4 Anne-Emanuelle Birn, Gates’s Grandest Challenge. Transcending Technology as Public Health Ideology, in: *Lancet*, Vol. 366, No. 9484, 2005, pp. 514–519.

Mtwara and Lindi regions of Tanzania between 2004 and 2009.⁵ IPTi is the administration of a full course of anti-malarial treatment to infants at risk of malaria at specific points in time and regardless whether or not they are infected by malaria at that particular moment. The two case studies are different at first sight. The acronym SPF66 stands for the attempts to transform African villages into veritable trial sites, where all external factors could be controlled. The IPTi project was geared towards the opposite. The aim here was to introduce IPTi into the national health system without any efforts to raise the performance of the latter. However, examined from a distance, the two cases share similar traits too. They are bound together by two overarching topics that account for their failure. The first issue is the problem of the stabilization of facts. As we will see, the vaccine trial did not just fail to control all the external factors at the trial site. Simultaneously, there were other trials with SPF66 going on in other parts of the world, based on different trial protocols that rendered the ultimate aim of standardizing results impossible. The second topic that concerns both cases is the issue of “health governance”, which as a leitmotif stands at the top end of medical research in the new millennium. I use the term “governance” not in a normative sense of “good” (or albeit “bad”) governance but more neutrally as a “*process of collective action between both state and non-state actors to resolve complex societal problems.*”⁶ That resolving complex societal problem in a collaborative manner is far from easy is one lesson drawn from the history of IPTi. The argument here is that this new partnership structure is not only marked by power inequalities amongst the different actors. Moreover, the entanglement of science and politics is likely to produce dysfunctional outcomes in health policy making in Africa.

It is likely that the case studies chosen here draw a rather negative picture. One has to acknowledge that there are examples where the efforts to put science into public health action have indeed been crowned with success. Currently, the Tanzanian government is up-scaling a national bed-net program that emerged out of research conducted by the IC and the STI which, together with past interventions, had a measurable impact on the

5 The most detailed history of these regions is: Felicitas Becker, *A Social History of Southeast Tanzania 1890–1950*, Ph.D. Study Cambridge University, Cambridge 2002, for a political history of the colonial period see: J. Gus Liebenow, *Colonial Rule and Political Development in Tanzania. The Case of the Makonde*, Evanston 1971.

6 Till Förster, Lucy Koechlin, *The Politics of Governance. Power and Agency in the Formation of Political Order in Africa*, in: *Basel Papers on Political Transformations*, No. 1, 2011, pp. 1–24, here: p. 8.

malaria epidemiology around Ifakara.⁷ Recalling the history of SPF66 and IPTi is nevertheless important because it contains the unpleasant prospect that the problems found in translating scientific results into public health policy have to be seen within the scientific system itself. While SPF66 indeed has become history, the discussions about translating IPTi into public health policy are still continuing. The history of IPTi lacks the historical “event” or the “historical fact” which some think history is made of. It can be nothing more than a history of the “not yet” – a history in the making.

SPF66 – A VACCINE CANDIDATE FROM THE SOUTH

In 1986, the eyes of the world’s scientific community turned to Colombia where Manuel Elkin Patarroyo, working at the INSTITUTO NACIONAL DE INMUNOLOGÍA in Bogotá, announced a new formula that would have a strong impact on one of the world’s most serious tropical diseases. The product he advertised was called SPF66 and the first vaccine to be synthesized chemically rather than made from genetically altered or dead pathogens such as viruses or bacteria.⁸ Patarroyo’s substance differed further from earlier attempts in that it was not aimed at preventing blood stage infection. Rather, it should reduce the number of parasites in the blood and therefore prevent life-threatening malaria, while allowing for the development of natural immunity. Thus, the vaccine’s major advantage was that it was not tailored to the needs of short-term tourists or business men (or women) but to the people who constantly lived in malaria infested areas.

Political Peptides

When Manuel Patarroyo proved SPF66 to be safe and immunogenic in Aotus monkeys and later in humans in the late 1980s, hardly anybody in the scientific community would have doubted that what was seen as a “scientific breakthrough” was badly needed. Soon after the publication of his results in “*Nature*,” however, several malariologists were rather skeptical as far as his products and especially the reproduction of his results were concerned. Even

7 David Schellenberg et al., The Changing Epidemiology of Malaria in Ifakara Town, Southern Tanzania, in: *Tropical Medicine and International Health*, Vol. 9, No. 1, 2004, pp. 68–76, Christian Lengeler, Don DeSavigny, Jacqueline Cattani, From Research to Implementation, in: Lengeler, DeSavigny and Cattani (eds.), *Net Gain. A New Method for Preventing Malaria Deaths*, Geneva 1996, pp. 1–15, Joanna Schellenberg, *KINET. A Social Marketing Programme of Treated Nets and Net Treatment for Malaria Control in Tanzania, with Evaluation of Child Health and Long-Term Survival*, in: *Transactions of the Royal Society of Tropical Medicine and Hygiene*, Vol. 93, No. 3, 1999, pp. 225–231, Happiness Minja, *Introducing Insecticide Treated Mosquito Nets in the Kilombero Valley (Tanzania). Social and Cultural Dimensions*, Ph.D. Study University of Basel, Basel 2001.

8 David Spurgeon, *Southern Lights. Celebrating the Scientific Achievements of the Developing World*, Ottawa 1995, p. 41.

though there were also critical voices to be heard from Colombian scientists, by far the loudest contestations came from the West, where such a success from the Third World “represents a blow to the scientific establishment that believes itself to be the trustee of malaria vaccine research.”⁹ Nevertheless, in an ad hoc meeting of the WORLD HEALTH ORGANIZATION (WHO) and the PAN AMERICAN HEALTH ORGANIZATION held in Bogotá in 1990, it was concluded that “spf66 merits to be pursued further and recommended that randomized, placebo-controlled trials should be carried out urgently among children living in areas of high transmission, particularly in Africa.”¹⁰ Setting up research trials with SPF66 in areas of high malaria transmission was, however, highly contentious. The British MEDICAL RESEARCH COUNCIL (MRC), which commanded large research laboratories in the Gambia, twice rejected to test the product on the grounds that they were still lacking the required technical information about the formulation of the vaccine. On the basis of such a thin body of information, so the argument went, it would never allow for a trial to be conducted in Britain and that is why it refused to do so on African ground.¹¹ The MRC’s hesitation offered possibilities for other research groups. After this rusty start, Pedro Alonso, a Spanish malariologist collaborating with both Patarroyo in Colombia and with Brian Greenwood, principal investigator for the pigeon-holed Gambia trials, turned to Marcel Tanner in order to investigate whether the IC was able and prepared to provide the necessary infrastructure for executing vaccine trials.¹²



Manuel Elkin Patarroyo

9 Kirsten MacLeod, Creation of First Malaria Vaccine Raises Troubling Questions about “Intellectual Racism”, in: Canadian Medical Association Journal, Vol. 153, No. 9, 1995, pp. 1319–1321, here: p. 1321.

10 (ASTI), Pedro Alonso, Thomas Teuscher, Marcel Tanner, Research for Development or Development for Research, in: Vaccine, 1994, Vol. 12, No. 2, pp. 99–101, here: p. 99.

11 Phyllida Brown, Colombia’s Malaria Vaccine Approved for Trials, in: New Scientist, 26.09.1992.

12 (ASTI), KIVAC, Correspondence Pedro Alonso, Pedro Alonso to Marcel Tanner, 11.12.1991, pp. 1–2.

When I asked Marcel Tanner why the STI stepped into the breach and decided to test the vaccine in rural Tanzania, his answer was unambiguous. From his point of view, there were – at this time – no reasons for hesitation. The major objective of this first phase III trial with SPf66 outside Latin America was to determine the efficacy of the vaccine in preventing malaria episodes in a “*hyper-endemic*” area, highly representative of large parts of Africa where most of the malaria sufferers lived.¹³ To him and his collaborators, it was important to test the product independently of Manuel Patarroyo’s group once all the ethical clearances were at hand.¹⁴ As we have seen earlier, Alonso’s request also matched the overall aims of the KMP, which prioritized research on possible vaccine candidates.¹⁵ As one can imagine, with the IC taking the lead in the SPf66 trial, the political tensions surrounding the vaccine did not vanish altogether. As it turned out, the relationship between the principal co-investigators of the Tanzania trial, Marcel Tanner (STI), Pedro Alonso (HOSPITAL CLINIC I PROVINCIAL) and Thomas Teuscher (IC) and the manager of the steering committee of WHO/TDR/IMMAL, Howard Engers, was not free of tension. Despite of the money released by WHO, the investigators suspected the organization of downplaying the trial in Tanzania and of promoting another trial with SPf66, which was led by Jerald Sadoff and the WALTER REED ARMY INSTITUTE OF RESEARCH in Washington. The researchers of the US Army worked in close collaboration with Patarroyo and used a vaccine that was produced in California instead of Bogotá and developed under “*good clinical practice*”, so as to satisfy the criteria of the FOOD AND DRUG ADMINISTRATION (FDA).¹⁶ The principal investigator’s suspicion that WHO was playing a double role stemmed from the fact that Patarroyo rejected the pharmaceutical industry’s 70 million offer for the patent rights for SPf66 and instead transcribed patent rights to WHO for free. In so doing, the Colombian scientists maneuvered the WORLD HEALTH ORGANIZATION into a rather delicate position of being forced to choose between endorsing a product for the Third World, the efficacy of which was not yet fully understood, or to join in the pharmaceutical industry’s tactic of delaying the application of Patarroyo’s product and rather of supporting the above mentioned efforts to strive for a US formulation, that would merit the seal of approval by the FDA.¹⁷ The impression that WHO was eager to belittle the Tanzanian trial was also reflected in the media. Journalists like Phyllida Brown, writing for the “*New Scientist*”, extensively revealed detailed information about the different stages of the development of a new malaria vaccine without mentioning the Tanzanian trial with one single word.¹⁸ In a letter to Odile Pujalon, chairperson of the IMMAL/TDR subcommittee, Pedro Alonso expressed his concerns as follows:

13 Secondary objectives were (a) to measure any immediate or delayed side-effects associated with the administration of SPf66 in a semi-immune population and (b) to assess the immunogenicity of each dose of SPf66, see: (ASTI), Pedro Alonso et al., A Trial of SPf66, A Candidate Synthetic Malaria Vaccine in Tanzania, Draft for Publication, p.9.

14 Personal Communication with Marcel Tanner, 10.05.2010.

15 (ASTI), Kilombero Malaria Project, Summary of the Kilombero Malaria Project, pp. 1–2, here: p. 1.

16 Brown, Colombia’s Malaria Vaccine Approved.

17 John Maurice, Impfstoff, Zündstoff, in: Die Zeit, No. 51, Dezember 1994, p. 37.

18 Brown, Colombia’s Malaria Vaccine Approved, see also: Brown, Malaria Vaccine Trials Stalled a Second Time, in: New Scientist, 21./28.12.1991.

“[...] I would like to draw your attention to a recent news report which appeared in Science. This plus other circulating comments seem to be creating the distinct impression that the IMMAL supported Tanzanian trial is not the adequate trial. This is, to say the least, scientifically debatable. However, IMMAL may be seen as contributing to create this impression by recommending the urgent execution of another trial, which as we all know, intends to use the SPf66 molecule synthesized in the US. I am worried that IMMAL might be seen as promoting the use of a US synthesized product rather than one, at least equally good, coming from a developing country and which is already being used in a WHO supported trial.”¹⁹

With all this political background noise and issues of where, by whom and to what ends a possible malaria vaccine was soon to make the life of nasty mosquitoes harder (and that of many people better), it was clear to Marcel Tanner and his collaborators that “*their*” trial should at least not be “*criticized on design and operational grounds*” and that their aim is “*to generate an efficacy figure that will be accepted by the scientific establishment from all fronts.*”²⁰

Standards and Standardizations

The trial was a joint venture between the IFAKARA CENTRE (IC/IFAKARA/TANZANIA), the NATIONAL INSTITUTE FOR MEDICAL RESEARCH (NIMR/TANZANIA), the SWISS TROPICAL INSTITUTE (STI/BASEL), the LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE (LSHTM/UK), the INSTITUTO DE PARASITOLOGIA (CSIC/GRANADA/SPAIN) and the FOUNDATION FOR BIOMEDICAL RESEARCH (HOSPITAL CLINIC I PROVINCIAL/BARCELONA/SPAIN) and received funds from Spain and the UNDP/WORLD BANK/WHO Special Program for Research and Training in Tropical Diseases (TDR).²¹ This latter program came into existence in the 1970s, in an attempt to raise the profile of parasitological research and to focus on six scourges particularly prevalent in Africa: malaria, filariasis, schistosomiasis, trypanosomiasis, leishmaniasis and leprosy.²² Similar to the cancelled trial in the Gambia, the trial in Tanzania was a placebo-controlled and double blind vaccine trial. Important for the later history of SPf66 in Idete was the definition of “*malaria*” and the methodology with which malaria cases should have been measured. It was clear to all that to assess the impact of the vaccine on “*clinical malaria*”, a suitable definition of this endpoint had to be found. Such a definition is more or less unproblematic in areas where malaria is not highly endemic or to where several non-immune people are migrating. There, fever symptoms and a confirmation of malaria parasites in the blood are usually enough for a sound diagnosis. In most parts of Africa south of the Sahara, where malaria is endemic or hyper-endemic, however, such a definition would

19 (ASTI), KIVAC, Correspondence Pedro Alonso, Pedro Alonso to Odile Puijalon, 22.10.1992, pp. 1–3, here: p. 2.

20 (ASTI), KIVAC, Correspondence 1994, Marcel Tanner to Giuseppe del Guidice, 07.03.1994, pp. 1–2, here: p. 1.

21 Pedro Alonso et al., A Trial of the Synthetic Malaria Vaccine SPf66 in Tanzania. Rationale and Design, in: *Vaccine*, Vol. 12, No. 2, pp. 181–186, here: p. 182.

22 Max Charlesworth et al., *Life Among the Scientists*, p. 230.

be inadequate. There, “to assume that a child who presents with fever and who has parasitaemia is ill from malaria is not valid, and will result in over-diagnosis.”²³ In order to avoid biased results, the researchers defined clinical malaria as a mixture of fever (37.5°C or higher) and high parasite density; the latter being uncommon in asymptomatic individuals (i.e. people with malaria but without showing any symptoms). This shows that the organization of a vaccine trial then did not just entail a mere transfer of scientific objects and arrangements from one place to another but a constant adaptation to new settings and basic considerations, some elements of which are transferable and others less so.

The work of the anthropologist Adriana Petryna investigates the pharmaceutical industry’s rising demand of “*treatment naïve*” human subjects and the off-shoring of clinical trials to mid- and low-income countries. In the logic of global research, these translations are legitimized through the fact that those trials constitute a social good in itself, providing extensive health care for the people involved. Moreover, these experimental terrains are depicted in a language of “*humanitarian crises*”, creating spaces of emergency in which research easily transgresses what might ethically be justifiable.²⁴ The context in which the testing of SPF66 in Tanzania unfolded was different. On the one hand, the logistics of clinical trials and field trials are not easily comparable. On the other hand, the scientific artifact under discussion here was produced in a laboratory in Colombia and therefore depicted as a successful example of a famous “*South-South-Collaboration*” with Western assistance.²⁵ Petryna’s argument is however compelling with regard to the different standards concerning risk-benefit considerations that separate medical research practices in Europe and Africa. The issue at stake here is that the vaccine’s move from Latin America to rural Africa not just entailed a mere shift of an scientific object produced in Bogotá, formulated and bottled in Spain and soon to be injected into the right upper arm of 580 children aged 1 to 5 in rural Tanzania. But it is also an acceptance of certain risks inherent in the process of applying a substance that was tested on adults in countries of low malaria transmission to semi-immune children in an area of much higher disease prevalence.²⁶ In other words,

23 Pedro Alonso et al., *A Trial of the Synthetic Malaria Vaccine*, p. 184.

24 Adriana Petryna, *Globalizing Human Subjects Research*, in: Petryna, Andrew Lakoff and Arthur Kleinman (eds.), *Global Pharmaceuticals. Ethics, Markets, Practices*, Durham, London 2006, pp. 33–60, see especially: p. 51, Petryna, *Clinical Trials Offshored. On Private Sector Science and Public Health*, in: *BioSocieties*, Vol. 2, 2007, pp. 21–40, Petryna, *When Experiments Travel. Clinical Trials and the Global Search for Human Subjects*, Princeton 2009.

25 (ASTI), KIVAC, Correspondence Pedro Alonso, Marcel Tanner, Thomas Teuscher and Pedro Alonso, 03.09.1993.

26 As the Chairman of the Committee, Carlos Alonso, wrote: “[...] the parameters of toxicity, safety and immunogenicity may vary from population to population due to the different genetic background of those populations and to the pressure of the disease. For that reason it is of the utmost importance to carefully determine those parameters before the main trial starts in order to avoid potential unwanted risks. Thus, it is recommended that the main trial should not be carried out until these parameters are clearly defined for the present situation,” see: (ASTI), KIVAC, Correspondence Pedro Alonso, Carlos Alonso, Chairman of the Committee, Centro de Biología Molecular, *Ethical Evaluation of the Study Protocol on the “Trial of a Potential Synthetic Malaria Vaccine SPf66 in Tanzania”*, pp. 1–3, here: p. 1.

while scientific objects and arrangements apparently can be transferred from one place to another, health insurance schemes in case of the vaccine's adverse effects seem to be more bound to specific locations. In this respect the argumentation of the Swiss-based legal firm is revealing. Asked whether the villagers involved in the trial could be included in a comprehensive health insurance scheme, the legal representative expanded on the issue explaining that

“From a legal point of view, the insurance coverage of the vaccination test program has to be in conformity with the requirements in the country in which the program is executed. I assume that legislation and relevant guidelines in Tanzania reflect the absence of general health insurance in that country and do therefore not require health insurance in connection with a vaccination test program. Guidelines existing in Switzerland are designed to protect Swiss population along the standards of the Swiss social security and health care system and cannot be transferred to a developing country and applied to its inhabitants.”²⁷

“Africa” in medical research thus evokes a double discourse and double standards. The official one depicts the continent as an ideal site for testing new medications, because diseases are widespread and the new products should reach those places where the “sufferers” are living. Less officially perhaps, “Africa” constitutes a good testing ground because people are more treatment naïve than in European countries and because the sense of “urgency” with which health interventions are imbued overshadows the lack of an existing legal framework that would protect the individual from adverse effects of these very interventions. In stark contrast to the considerations about where to do research, how certain diseases are defined and how trials are organized are the collective anxieties and individual decisions of whether or not to participate in this form of research on a local level.²⁸ It is to this dimension to which we should turn now.

Idete

Idete is a creation “from above.” It was registered as a ujamaa village in the course of the socialist villagization program in 1974 and buoyed by its special location on both the road and the TAZARA railway-line heading towards Zambia. Most of the village's older dwellers were once forcefully relocated and given a plot where they could grow maize and naturally irrigated rice. There were no health facilities available in the 1970s and one single bicycle

27 (ASTI), KIVAC, Correspondence 1992/1993, Christian Brückner (Christ, Löw, Brückner, von Planta & Staehelin), Malaria Vaccination Program in Tanzania, 06.07.1992, pp. 1–2, here: p. 2.

28 James Fairhead, Public Engagement with Science? Local Understandings of a Vaccine Trial in the Gambia, in: Journal of Biosocial Science, Vol. 38, 2006, pp. 103–116.

was the only means of transportation in cases of emergency.²⁹ My own research conducted during 2010 revealed contradictory statements as far as the perception of malaria was concerned. These differences were not just due to varied individual statements but also due to the different sources consulted. Not surprisingly, in an area of high malaria transmission, the record book kept at the village dispensary registered a number of 600–800 malaria “cases” each month.³⁰ This authoritative evidence captured on paper was somehow contradicted by those villagers who asserted that malaria was not so much of a problem anymore because of the widespread use of mosquito nets. Others in turn hinted to the fact that the disease still takes its steady toll among the villagers. Less an issue of contestation is the fact that Idete has extensively been visited by researchers working for the Tanzanian government, as well as by those of the IC throughout the years. The village was included as a research site within the framework of the KMP and still today, fieldworkers of the IFAKARA HEALTH INSTITUTE (IHI, as the IC was renamed in 2008) meticulously record the health situation, patterns of migration, signs of prosperity and destitution, or birth and death rates of every household and at regular intervals.³¹ The IHI and Idete’s dispensary staff were also the major distributors of biomedical messages in Idete. They made sure that the villagers got it right concerning the connection between the mosquitoes and malaria, explained the adequate measures of prevention and urged the sufferers to seek biomedical advice as soon as the first symptoms appeared. The anthropologist Susanne Hausmann Muela showed in her study about the “*community understanding of malaria*” that the population living in and around Ifakara understood very well the biomedical message but that this information co-existed and sometimes merged with pre-existing concepts about the disease: a phenomenon she termed “*medical syncretism*.”³²

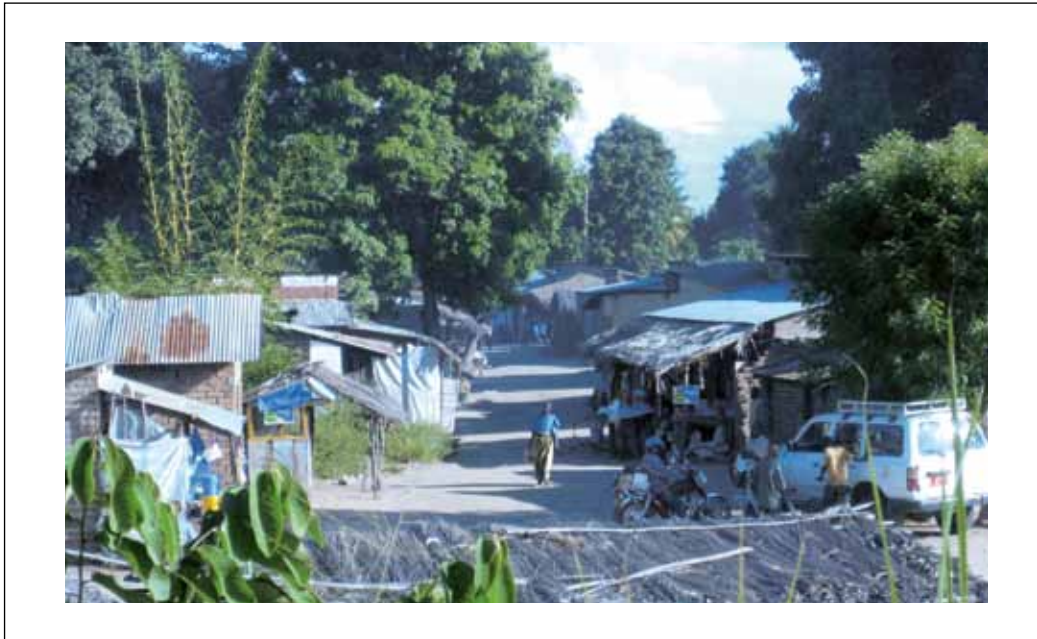
Vaccines to prevent certain childhood diseases were a familiar biomedical tool within the complex pattern of different disease etiologies and therapeutic regimes. The “*Expanded Program on Immunization*” (EPI), which was launched by WHO and UNICEF in the mid-1970s in the quest to enhance vaccine coverage among children, is still considered a highly effective weapon by the villagers. Nevertheless, the first reaction on the announcement of the SPf66 trial included both relief and widespread discomfort.

29 Interview with LR in Idete, 03.04.2010.

30 (ASTI), KIVAC, Correspondence 1992/1993, Winnie Mpanju, Malcolm Molyneux, SPf66 (Candidate Malaria Vaccine) Trial Ifakara Centre, Tanzania. Report of Trial Monitors’ visit 29.07–05.08.1992, pp. 1–12, here: p. 2.

31 Joanna Schellenberg et al., Ifakara DSS, Tanzania, in: International Development Research Centre (ed.), *Population and Health in Developing Countries. Population, Health and Survival at INDEPTH Sites*, Vol. 1, 2002, pp. 159–164.

32 Susanne Hausmann Muela, *Community Understanding of Malaria, and Treatment-Seeking Behavior in a Holoendemic Area of Southeastern Tanzania*, Ph.D. Study University of Basel, Basel 2000.



Idete, 2010, photo: Lukas Meier

Here, it is important to lose some words on the methodological implications and constraints that I faced during my discussions with the trial population. Jensen Charles, the son of Charles Leutel who was in charge of Idete's dispensary at the time of the *SPF66* trial, still knew many of the parents who allowed their children to be included in the vaccine trial and he could easily arrange meetings between them and myself. His close relationship with the participants might probably account for a certain bias in the answers. However, more challenging from a methodological point of view was the very fact that our "*purposive sample*" included only those who decided in the end to participate in the trial and who, by their very nature, were supposed to have a positive attitude towards the vaccination project. To better cope with methodological biases, I started to pose my questions indirectly, asking the participants about the arguments of those who refused to participate in the trial. Through these thick layers of gossip I learned that the village was very much divided on this issue. It was through these indirect channels that I came to know that the participants were accused by the absentees of too frivolously offering their children to a biomedical trial, the intention of which was nothing more than to decimate the population anyway, "*quite similar to the family planning initiatives*", as one of the interviewees remarked.³³ Others, supposedly, blamed the participants for having agreed just because of the material benefits a commitment would bring, or, that malaria was too severe a disease to be successfully controlled by a vaccine.³⁴ As one mother recalled the many discussions within the village:

33 Interview with JM, 03.04.2010.

34 Interview with AL, 17.04.2010.

“First, we were very much afraid in that case, and why were we afraid? It was because people said that they take the blood and the blood is for business so they take a lot of blood from the bodies of the children so they are going to die. Secondly, other mothers around us, they said, ah, why are you taking your children to the vaccination station, because of the soap, you don’t have money to buy soap, so you bring your children because of the soap [...] But I have taken the child to the hospital because there is malaria in the household. Because of Skola (her daughter, LM). She was always suffering from malaria, Skola, she was always suffering. I said, ah, I don’t try to hear this words around so I will take my child – if she dies ok, if she’s not dying, ok. If I don’t take my child to the vaccination station she is going to die anyway. She is always suffering in the house. It is better to bring her to the hospital. If she dies, no problem. But around, some mothers insisted that I am going to take the child to the vaccination for the soap and they asked: Why? Don’t you have money to buy soap? Only 100 Shillings for one piece of soap? But my child was still suffering from malaria, so I decided to take her, but there were some discussions around.”³⁵

The stories that circulated within the village after the announcement of the vaccine trial preserved the villagers’ “anxieties” about having their children injected with an unknown substance with doubtful outcomes.³⁶ The villagers’ answers to the question of why they participated in the trial roughly fell into two categories. A first set of answers weighted the severity of the disease against the risk of the vaccine. This for instance resonated in MK’s statement that *“we indeed did not know what the vaccine was about but we are very aware what malaria is all about and that is why we were happy to take our children to the vaccination station.”*³⁷ A second set of arguments more clearly revealed social aspects and the vital role of the village leadership in the villagers’ decision-making. *“The government would never be able to sacrifice their people,”* one interview partner told me.³⁸ Others in turn decided to do so because others did so too or were convinced by villagers working in the biomedical sector (i.e. the dispensary).³⁹

35 Interview with GN, 22.03.2010, see also: Uli Beisel, René Gerrets, *The Public of Public Health*. In *Search of “Civil Society” within Contemporary Malaria Control in Africa* [unpublished draft] pp. 1–30, here: p. 16.

36 Melissa Leach, James Fairhead, *Vaccine Anxieties*. *Global Science, Child Health and Society*, London 2007, Wenzel Geissler, *He is Like a Brother I can Even Give Him Some Blood*. *Relational Ethics and Material Exchanges in a Malaria Vaccine “Trial Community” in the Gambia*, in: *Social Science and Medicine*, Vol. 67, 2006, pp. 696–707, Fairhead, *Where Techno-Science Meets Poverty*. *Medical Research and the Economy of Blood in the Gambia*, in: *Social Science and Medicine*, Vol. 63, 2000, pp. 1109–1120.

37 Interview with MK, 22.03.2010.

38 Interview with AD, 03.04.2010.

39 Ibid.

As we have seen, apart from the trust in political leadership, the prospect of being injected with a substance, the effects of which on one's wellbeing could not yet be related to past experiences with vaccinations, forced the villagers to make the decision on a very existential level. Their decisions whether or not to participate in the trial were determined by the different perceptions about the threat of malaria, by considerations about the risk or possible benefits that SPF66 entailed and by social and economic concerns. It is important to note that the insecurities and the mutual accusations that accompanied the vaccine trial in Idete did not divide the villagers from the biomedical experts. Local "concerns" and global "expertise" did not belong to different spheres of reason. As we will see in the following, the scientific community too was very much divided about the effects of SPF66.

The Interpretation of Truth

On 29th October 1994, the principal investigators and their collaborators on the vaccine trial published the data gathered at Idete in the scientific journal "the Lancet." They did indeed confirm that the protein SPF66 was able to "reduce the risk of malaria among children highly exposed to natural infection" but the efficacy estimate of 31% (CI 0–52) only allowed for cautious optimism.⁴⁰ As the authors concluded "the estimated efficacy of SPF66 is lower than that of most vaccines in use for other infections. However, since the burden of malaria morbidity and mortality is vast, measures with a moderate efficacy merit development."⁴¹ This, however, did not appeal to everyone. By far not every member of the so-called scientific community agreed that the efficacy figure which emerged from the Idete trial would justify an exhausting debate about the future role of SPF66 as a public health measure. Even worse and detrimental to the investigators' original wish to conduct a trial that would be "scientifically accepted by all fronts", critical voices were raised concerning the reliability of the data presented. "We have no clear evidence about the efficacy or the inefficacy of SPF66," one member of the INSTITUTE PASTEUR in Paris complained after publication of the Lancet article. Confirming previously uttered concerns by Jean-François Trapé (ORSTOM) and Christophe Rogier (INSTITUT PASTEUR, Dakar), he was sure that "the ways how the data were collected on the spot were deficient" and that "the number of fever cases measured in non-vaccinated children was inexplicably low."⁴²

For the purpose of my argument, several aspects of the unfolding scientific debate subsequent to these concerns are interesting because they point to the instability of experimental terrains and the lurking gap between scientific assumptions and local realities. In a "draft reply" aimed at mitigating the accusations from Dakar and Paris, the scientists involved in the Idete trial mused about the possible reasons of why the number of

40 Pedro Alonso et al., Randomized Trial of Efficacy of SPF66 Vaccine Against Plasmodium Falciparum Malaria in Children in Southern Tanzania, in: The Lancet, Vol. 344, 1994, pp.1175–1181, here: p. 1180.

41 Ibid., p. 1181.

42 Pedro Alonso et al., Randomized Trial of Efficacy of SPF66, p. 1181.

clinical malaria episodes was lower than one would have expected in an area of high malaria transmission.⁴³ As it seems, the prospect of establishing a standardized trial arrangement where all the external factors could be brought under control had probably been too optimistic from the trial organizers' point of view. The first factor they assumed might have had a possible impact on the low number of cases reported was the free medical service provided at the dispensary during the trial. This finding is of huge public health relevance. In other words, free and improved health care delivery provided in the context of clinical trials might have reduced the number of reported malaria cases (at dispensary level).⁴⁴ Secondly, the recorded malaria incidence was higher among those children living closer to the dispensary suggesting that reporting rates were lower from more remote parts of the village. Thirdly, the main data analysis depended on passive case detection (PCD), meaning that it included all cases of clinical malaria that showed up at dispensary level. This approach was probably more realistic from the population's point of view, but was likely to exclude all cases with "*asymptomatic parasitaemia*" (i.e. all those who are infected with the disease but without showing any symptoms). Fourthly, the frequency of clinical malaria is negatively correlated to age, meaning that with the study cohort coming of age, the risk of clinical malaria decreased.⁴⁵ Thus, the principal investigators' answer to the accusations reveals that the scientific results gathered in Idete were not only dependent on the adequate definition of "*malaria*" in a hyper-endemic area. Moreover, the data were influenced by the very intervention itself, as the improvement of the health services and the aging of the trial population implied. But if, as argued by the scientists, the social fabric of the trial population is fundamentally changed by performing a medical trial, then the very notion of the "*medical trial*" is challenged.

Mechanisms of critical self-reflection are innate in every activity termed "*science*." In the natural sciences at least, scientific results strongly correspond to the outside world. It is not only that there is often an economic necessity for rendering scientific results applicable to certain contexts. Moreover, already the possibility of application has to meet a certain level of approval and acceptance by a wider scientific community. The less one's own results are accepted by outside experts, the more one tends to view one's own products in a critical light. At least, this is what happened in our case when the question whether or not the reactions to the Lancet study were justified or not plagued by the Idete scientists. In a letter to a collaborator from the LSHTM with the meaningful title "*what are we trying to do?*", one scientist from the STI tried to capture the ways science progresses. It is worth quoting him at length:

43 (ASTI), KIVAC, Correspondence 1994, Draft Reply to Lancet Letters.

44 See also: Alonso et al., Randomized Trial, p. 1180.

45 Ibid.

“I thought that I was trying to find out from the data as much as possible about what SPf66 is likely to be doing in these children. This involves making hypotheses, and testing them against the alternatives using not just the evidence from the trial but also what we already know from other sources. Since the primary effect (published in the Lancet) that we saw is so small, and subject to considerable uncertainty, nothing relating to clinical episodes can be expected to be free of reasonable doubt, and so we must hedge all conclusions with words like “likely”, “suggest”, “appear to indicate”. You would not want to send anyone to prison on the strength of evidence as weak as this. However, this evidence is the best that we have. If someone comes along next week and shows that we are wrong, I would not be surprised. This is how science progresses.”⁴⁶

Both scientists’ duty was to turn the data collected on Idete’s slippery ground into scientifically sound and mathematically stable facts and figures. The collaborator from the LSHTM, however, was less inclined to accept the Popper-influenced ideas of science’s progress and argued that SPf66 should not yet be abandoned. Research should now focus on large-scale application and on the question of whether SPf66 would have any effect on severe disease and death.⁴⁷ In this, she shared the views of most of the public health experts working on an effective means to protect people from malaria. However, if SPf66 really had a future, it was dependent on the successes it achieved in other endemic settings. Two trials held in the Gambia and in Thailand determined the fate of SPf66 and finally rendered it to just one more episode in a whole series of unsuccessful attempt to come up with a malaria vaccine.⁴⁸

The Global Blow

Despite the hesitations described above, the West African Gambia did host a vaccine trial after all. The trial was conducted in collaboration with the Patarroyo Group and included the vaccine produced in Columbia as well as that from the US. The results obtained with SPf66 did not give many reasons for high hopes. *“I am afraid that we have some rather worrying data from the Gambian SPf66 trial,”* Brian Greenwood stated in a letter to Manual Patarroyo and continued:

“At the beginning of May, the MRC Trial Monitoring Committee, chaired by Malcolm Molyneux met to review the side effects and serological data that we had obtained after administration of the third dose of American or Colombian SPf66 to the children in our pilot trial. There were no major differences in the incidence of local or systemic side effects

46 (ASTI), KIVAC, Correspondence, anonymized, What Are We Trying To Do?, pp. 1–6, here: p. 1.

47 (ASTI), KIVAC, Documents IV, anonymized, 08.06.1995, pp. 1–3, here: p. 1.

48 Robert E. Desowitz, *The Malaria Capers. More Tales of Parasites and People*, Research and Reality, New York 1991.

among children who had received SPf66 or IVP (Polio Vaccine, LM). However, the committee noted that more children in the malaria vaccine group had had a positive blood film with or without accompanying fever than had children given polio. The tendency was present with both the American and Colombian vaccines and was most prominent in the group that had received the high dose Colombian vaccine.”⁴⁹

The efficacy figure that emerged from the Gambian trial was a low 3% and the SPf66 and placebo groups did not differ in parasite rates or in any other indicators measuring malaria.⁵⁰ However, for Marcel Tanner it was clear that the results from this parallel study should not affect the discussion about taking a further step and to assess the efficacy of SPf66 in infants under one year of age. “Given the results from the Tanzanian trial for an area of high and perennial transmission, trials with immunization of infants and with severe malaria as endpoint represent a logical evolution,” he insisted and pointed to the differences between the Gambia and the Idete trial.⁵¹ The trial protocols as well as the characteristics of the trial population were too different, he argued. Consequently, the abandonment of SPf66 without having assessed its efficacy in infants living in the Kilombero valley would be premature.

The argument of the different local characteristics of the study sites is not as trivial as it might seem at first sight and was even more convincing after the publication of dampening news from Thailand. There, the efficacy of SPf66 was assessed in a double-blind placebo-controlled trial with Karen refugees living in a military controlled refugee camp in the Northwestern part of the country. In their final conclusion, François Nosten (Mahidol University), who led the trial, and his colleagues made it clear that “there is no evidence that SPf66 is effective against falciparum malaria” and that “there appears to be little justification for further trials with this vaccine.”⁵² As elaborated above, this trial had long been a nuisance for the Swiss-Spanish-British-Tanzanian team because it worked with a version of SPf66 that was manufactured in the US rather than in Colombia. While the results probably marked the final blow to the vaccine, the questions about the comparability of people, sites and products remained. It will be important to consider once more at full length the arguments of Marcel Tanner and Pedro Alonso, who accepted the final conclusions drawn by Nosten and his fellow researchers but not without adding some question marks:

49 (ASTI), KIVAC Documents III, Brian Greenwood to Manuel Patarroyo, 26.05.1994, pp. 1–2, here: p. 1.

50 (ASTI), KIVAC, Correspondence 1995, The Lancet: Press Release. Malaria Vaccine not so Efficacious, 19.08.1995.

51 Ibid., Marcel Tanner to Howard Engers, Summary Document of Meeting to Discuss SPf66 Development 20th–21st March 1995, 17.04.1995, pp. 1–2.

52 François Nosten et al., Randomized Double-Blind Placebo-Controlled Trial of SPf66 Malaria Vaccine in Children in Northwestern Thailand, in: The Lancet, Vol. 348, No. 9029, 1996 pp. 701–707, here: p. 707, see also: Michael Day, Malaria Vaccine Fails to Deliver, in: New Scientist, 21.09.1996.

*“Firstly, we have no evidence as to the possible role that the genetic make-up of the population of parasites or volunteers may play in modulating efficacy. Secondly, there are a number of differences between the Thai trial and all other trials, including the type of placebo used, the very intense active daily case detection, and perhaps the specificity of the case definition used. Finally, and probably most important, the authors acknowledge that there is strong evidence that the US manufactured product is not identical to the Colombian manufactured SPf66. Not only are there differences in the proportion of monomer to polymer between the two products, but these differences have been shown to imply significant differences in immunogenicity both in mice and in humans, with the US manufactured version having been shown to be consistently less immunogenic than the Colombian spf66.”*⁵³

Besides the pressing ethical question why the persons in charge of the Thai trial chose a vaccine that in previously conducted studies proved to be less immunogenic in humans than the Colombian manufactured SPf66, the whole issue generally revealed

*“[...] once again the difficulty and importance of standardizing products for field trials [...] as well as the need of standardizing protocols and procedures in order to allow for adequate comparison of results. The Thai trial has also highlighted the need to choose the trial sites and subsequently interpret the results in relation to the relevance to the different populations of the malaria endemic areas. In other words, how relevant are the results obtained in northern Thailand among refugees living in a camp under daily medical surveillance and the protection of the Thai army, to the malaria endemic populations of sub-Saharan Africa?”*⁵⁴

Looking back, the history of malaria vaccine development has much to say about the difficulties encountered in transforming medical research into sustained public health action. Two points in particular rendered such a transition difficult: Firstly, SPf66 suffered from a birth defect. Instead of being just a chemical substance (if there are “just” chemical substances at all), its life reads like a political biography shaken and frayed by political and economic interests. The very fact that SPf66 was produced in Colombia, that its patent was not sold to the pharmaceutical industry but to the WHO was more than enough to provoke serious doubts about the effectiveness and the safety of the substance. Secondly, it is impossible to standardize scientific products, trials sites and trial protocols. The SPf66-compound that emerged out of the US laboratories is not identical to that produced in Colombia and the differences between the results of the Gambia trial and the Tanzania trial were explained by the different study protocols. However, there were not just

53 (ASTI), KIVAC Documents IV, Pedro Alonso, Marcel Tanner to J. Rodes (The Lancet), 15.10.1996, pp.1–2, here: p. 1.

54 Ibid., p.2.

disparities in approaches. The attempt to establish laboratory conditions in African villages was thwarted by its “*reality effects*”: the mere presence of Western experts in the village, the objects of development (nets, sodas, soaps, etc.) they introduced and the desire they created, the renovation and provision of the dispensary with essential drugs, the aging of the trial population, all these elements were not only beyond the scientists’ control but they very much influenced the results presented. The example of the second case study is different. IPTI does not stand for the attempt to render African villages laboratory-like. Rather, the health system as a whole becomes the laboratory here, however without science to actively intervene. Nevertheless, that the problems of up-scaling health interventions remained the same is the topic of the next section.

INTERMITTENT PREVENTIVE TREATMENT OF MALARIA IN INFANTS (IPTI) – A HISTORY IN THE MAKING

At the beginning of the new millennium, the concept of development as a specific mindset ruled out other legitimate forms of remodeling African societies. It has become the mainstream topic cutting-across different academic fields as well as policy making. Today it is hardly possible to mention agriculture, health, infrastructure, education or economy in sub-Saharan Africa without referring to development. That development is ubiquitous does not mean, however, that development practices have not changed considerably over time. Development in 2010 is not necessarily any longer a bilateral bargain between industrialized states and “*states-to-be-developed*” but of multi-lateral consortia and philanthropic institutions. Development in the new millennium is also the reason for big gestures. In 2003, multi-billionaire Bill Gates showed himself to be shocked by the appalling health situation in sub-Saharan Africa and announced that the BILL AND MELINDA GATES FOUNDATION (BMGF) would allocate a sum totaling \$168m to offer some relief. The money BMGF released was thought to address one of Africa’s most tenacious scourges: malaria. To start with, the foundation selected three areas of intervention: a) using existing malaria drugs to prevent infants from becoming infected b) developing new drugs to combat drug-resistant malaria and c) finding a malaria vaccine.⁵⁵ Highly resistant malaria parasites in Africa and a regained belief among Western scientists in the impact of different so-called “*integrated*” malaria interventions were then able to bring the topic once again to the high ranks of the international donor community.

The new movement into which scientists, policy makers and philanthropists were easily drawn was likely to account for a difference in malaria research compared to past decades. For equally as important as the slogan of one of the more pronounced initiatives to “*Roll*

55 Bill Gates, The World Must Do More to Conquer Malaria, in: Financial Times, 22nd September 2003.

Back Malaria” was the manner in which it should now proceed: in mutual partnership between the different actors. In other words, the new practices of malaria research displayed a “*governance structure*” that comprised global charities, international organizations, pharmaceutical industries, scientific communities as well as national governments.

A first introductory part of this second case study will look at the organization of the IPTi trials in West and East Africa. It is concerned with the organization and structure of the IPTi consortium, the main coordinating body of the research efforts on IPTi on the continent. The second part reflects the implementation and the policy discussions surrounding a specific IPTi trial in Tanzania. As with the history of SPF66, the attempt will be made to look at different “*local*,” “*global*” and “*national*” arenas, in order to hint at the many problems that probably inhibit the transfer from research into health policy action.

Organization of Science

An IPTi study conducted in Ifakara between 1999 and 2001 using the anti-malarial drug “*sulphadoxine-pyrimethamine*” (SP) showed a protective efficacy of IPTi against the incidence of clinical malaria of 59%.⁵⁶ As the insecticide-treated nets before, IPTi was likely to be a new effective tool in the fight against the disease. At the beginning of the new millennium, the scientific community met at short intervals in order to set up a comprehensive research program addressing issues such as the efficacy and safety of the intervention in different epidemiological settings in Africa. The BMGF supported these ambitions with the transfer of \$28m to a multinational consortium established to coordinate the different trials in East and West Africa.⁵⁷ The consortium’s collaborative funding proposal included a series of different trials all of which – with the exception of the trial in Kenya – used SP from the Basel-based company HOFFMANN-LA ROCHE.⁵⁸

The previous section on SPF66 showed how science could make mischief of competitiveness between different research groups. Instead, IPTi trials were designed to grow in an atmosphere of mutual trust and open communication. On a governance-level, the IPTi

56 David Schellenberg et al., Intermittent Treatment for Malaria and Anaemia Control at Time of Routine Vaccinations in Tanzanian Infants. A Randomized, Placebo-Controlled Trial, in: *The Lancet*, Vol. 357, 2001, pp. 1471–1477.

57 (DMT), IPTi, BILL AND MELINDA GATES FOUNDATION (BMGF), *New Grants to Accelerate Malaria Research and Development*, pp. 1–2, here: p. 1.

58 *Ibid.*, David Schellenberg, Jane Crawley, Intermittent Preventive Treatment with Antimalarial Drugs Delivered Through the Expanded Programme of Immunisation. A New Potential Public Health Strategy to Reduce the Burden of Malaria in Young African Children. A Proposal to the BILL AND MELINDA GATES FOUNDATION from the IPTi Consortium, 18.04.2003.

consortium should vouch for such an ambitious task. The consortium was a showcase in complexity: seen from a bottom-up perspective, it comprised the single projects, which were under the responsibility of the collaborative research groups and to whom funds were channeled directly. The projects were endowed with “*Data Safety Management Boards*” (DSMB), who reported any adverse effects during the course of the trials and whose representatives gathered in the “*Consortium Safety Panel*” (CSP). As its name indicated, the “*Investigators Committee*” brought together all the key investigators and opened the floor for discussing the several scientific issues emerging from the different trial sites. The “*Core Administration*”, based in Barcelona, guaranteed coordination and the smooth exchange of information between the different groups: The “*Consortium Executive Committee*” with Brian Greenwood and Marcel Tanner as its standing members, and otherwise rotating membership, was asked to oversee the whole consortium and to provide guidance to its coordinator in Barcelona.⁵⁹ Finally, a “*Policy Platform*” based at WHO would guarantee the exchange between the consortium and WHO/UNICEF, to ensure and facilitate the translation of scientific evidence into policy recommendations and to “*create in malaria endemic countries in Africa an environment that is conducive to the adoption of IPTi as national policy.*”⁶⁰ One of the consortium IPTi trials was held in southern Tanzania in a region one of the commentators would soon refer to as the “*forgotten southern zone.*”⁶¹

THE FORGOTTEN SOUTHERN ZONE:

IMPLEMENTATION-RESEARCH IN MTWARA AND LINDI REGIONS 2004–2009

On Thursday 22nd of April 2004, members of the IFAKARA HEALTH RESEARCH AND DEVELOPMENT CENTER (IHRDC) took advantage of an “*Integrated Management of Childhood Illness-workshop*” held in Mtwara to introduce themselves and their IPTi research plans to the key medical personnel of the southern districts. They exposed their audience to the depressing statistics on malaria infection and childhood mortality, the suitability of this area due to cautious research activities being undertaken so far and the benefits of the project also in terms of “*employment opportunities in the southern regions.*”⁶² The next day, the IHRDC team made a first contact with the countryside. They visited the Mahurunga Health Center and the Madimba dispensary of rural Mtwara district from where they had a breath-taking view of the “*tree-covered hillside of northern Mozambique*” just a few miles away. This gorgeous view

59 (DMT), IPTi, Meeting Minutes, 18–20 January 2004, pp. 1–10, here: p. 6.

60 Ibid., Jane Crawley, Planning for Success. A WHO-UNICEF Policy and Programme Implementation Platform of Intermittent Preventive Treatment in Infants. A Proposal to the Bill and Melinda Gates Foundation, 10.01.2004, pp. 1–9, here: p. 3.

61 Archiv Ifakara Health Institute Mtwara Branch (AIHI-MB), IPTi Project Reports, Dr. Budeba (RMO Mtwara) cited in: Introducing IPTi in the Southern Zone, Saturday, 24th April 2004, pp. 1–7, here: p. 5.

62 Ibid., p. 3.

was somewhat troubled by the sudden realization that NIMR was running a malaria trial in the area and not in Mtwara urban district as previously assumed. “*The team spent many hours on Friday evening poring over maps and discussing various pros and cons of alternative districts to Mtwara Rural district.*”⁶³ They finally selected five districts in Lindi and Mtwara regions (Lindi Rural, Nachingwea, Ruangwa, Newala and Tandahimba) for their intervention without, however, including Mtwara rural district, due to possible interferences with the NIMR plans. The Regional Medical Officer of Mtwara regretted this decision but nevertheless welcomed the arrival of the experienced researchers for it offered the longed-for opportunity for scientific and economic progress.

During these busy days of investigation, of gathering around outspread maps and of demarcating intervention from control areas, the Regional and District Medical Officers (RMOS/DMO’s) probably learned that the IPTi study was based on an effectiveness protocol. In contrast to the controlled laboratory conditions encountered in the SPF66 trial in Idete, the aim here was to see how an intervention worked under a “*real life situation*” within the existing health system and without too much interference by the research team.⁶⁴ The meeting attendees might have also been informed about the study’s objectives: the highest ranks of the research agenda featuring the development of a delivery strategy of IPTi to rural communities, the assessment of a safety profile of SP, and generating information about acceptability, cost-effectiveness and drug resistance as well as the impact of the intervention on mortality and morbidity figures.⁶⁵

To Mtwara and Lindi regions, IPTi came in waves: the first year looked back on intense efforts to assess the shortcomings of the health system on a facility level, to pay visits to the *Council Health Medical Teams* (CHMT’s) in all selected districts and to inform the different stakeholders on all levels about the project. In two stakeholder meetings, representatives of the Tanzanian health system and international organizations were able to engage in discussing the pressing issues, thus paving the way for the smooth translation of research

63 Ibid., p. 1.

64 In striking similarity to the Idete trial, however, several of the already well-proved research collaborators emerged on the funding application of the IPTi trial in southern Tanzania: the HOSPITAL CLINIC in Barcelona, the IFAKARA HEALTH RESEARCH AND DEVELOPMENT CENTER, the LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, the SWISS TROPICAL INSTITUTE and the NATIONAL MALARIA CONTROL PROGRAM, see: Ibid., Official Documents (IPTi in Southern Tanzania), David Schellenberg, Community Effectiveness of Intermittent Preventive Treatment Delivered through the Expanded Program of Immunisation for Malaria and Anaemia Control in Tanzanian Infants. A Collaborative Funding Proposal, 19.04.2003, pp. 1–59. Principal Investigator was David Schellenberg (LSHTM), Co-Principal Investigators in Tanzania: Hassan Mshinda (IHRDC), Joanna Armstrong Schellenberg (IHRDC/LSHTM), in Europe: Pedro Alonso (HOSPITAL CLINIC, Barcelona), Marcel Tanner (STI), Co-investigators were: Salim Abdulla (NMCP), Guy Hutton (STI), Clara Menendez (HOSPITAL CLINIC, Barcelona), Robert Pool (LSHTM) and Cally Roper (LSHTM). A grant of almost 7 million CHF was allocated to the SWISS TROPICAL INSTITUTE who acted as the grant-holder. All project expenditures in Tanzania were “*posted at the headquarters of IHRDC in Dar es Salaam, consolidated, locally audited and forwarded to STI*” see: (ASTI), IPTi, U. Wasser, RE: Fragekatalog zum Tanzania Projekt, pp. 1–8, here: p. 5.

65 (AHI-MB), Schellenberg, Community Effectiveness, p. 12.

into sustained public health action.⁶⁶ Since “*IPti*” was not such a handy term to be caught and remembered easily by the population, the pre-intervention phase was also devoted to finding an adequate “*brand name*” which would facilitate diffusion. After calibrating various names and symbols with the reaction of the rural dwellers, the Swahili term “*mkinge*” (“*protect*”) emerged as the suitable name under which the project was soon going to sail. In a second phase, the staff was trained at the regional, district and facility levels to administer and meticulously record the single *SP* doses. For the latter purpose, for instance, the common clinic card had been amended with a special space where the three *mkinge* doses could be filled in. Moreover, extensive household surveys, the study of health-seeking behavior as well as investigating the state of child health in the area pre-dated the implementation process.



Mkinge-advertisement, source: IFAKARA HEALTH INSITUTE (Mtwara-Branch)

66 (AIHI-MB), *IPti Project Report*, David Schellenberg, *Community Effectiveness*, p. 14, for a description of the different implementation stages see also: Fatuma Manzi et al., *Intermittent Preventive Treatment for Malaria and Anaemia Control in Tanzanian Infants. The Development and Implementation of a Public Health Strategy*, in: *Transactions of the Royal Society of Tropical Medicine and Hygiene*, Vol. 103, No. 1, 2009, pp. 79–86.

Jamhuri ya Muungano wa Tanzania
Wizara ya Afya

KADI YA KLINIKI YA WATOTO

| | | | |
|-----------------------------|----------------------|-------------------------------|--|
| Jina la Kliniki | | Na. ya Mtoto | |
| Jina la Mtoto | | Mme/Mke | |
| Tarehe ya Kuzaliwa | | Uzito alipozaliwa (Kilo) | |
| Mahali alipozaliwa | | Hospitali / Nyumbani / Njiani | |
| Jina la Mama / Mlezi | | | |
| Jina la Baba / Mlezi | | | |
| Mahali mtoto anapoishi sasa | Mtaa / Kijiji / Mtaa | | |

| CHANJO (Andika Tarehe aliyopata) | | | |
|-------------------------------------|---|--|--|
| AINA YA CHANJO | Anapozaliwa au mara ya kwanza afikapo kliniki | Marudio miezi 3 baada ya chanjo kama kovu hakuna | |
| BCG (Kufua Kikuu) (Sindano / Bega) | | | |

| POLIO (Kupoza) (Matone / Mdomoni) | 0 | 1 | 2 | 3 | |
|---|-------------|---------|---------|---------|---------|
| | Anapozaliwa | Mwezi 1 | Miezi 2 | Miezi 3 | Miezi 9 |
| DPT-HB (Donda Koo, kifaduro, Pepopunda na Hepatitis B) (Sindano / Paja) | | | | | |
| SURUA (Sindano / Paja) | | | | | |

| VITAMINI A | | | |
|-------------------------------|---------|----------|----------|
| VITAMINI A (Matone / Mdomoni) | Miezi 9 | Miezi 15 | Miezi 21 |
| | | | |

| MKINGE | | | |
|----------------------------|--|---------|---------|
| MKINGE (Kidonge / Mdomoni) | | Miezi 2 | Miezi 3 |
| | | | |

Extended clinic card, source: IFAKARA HEALTH INSTITUTE (Mtwara-Branch)

The Expanded Program of Immunization (EPI) and Health Sector Reform 1993

One of the project’s major objectives was to couple IPTi with the “*Expanded Program of Immunization*” (EPI). The three doses of antimalarials should be administered together with the childhood vaccines and therefore be part of the routine contact of the population with the health system. UNICEF introduced EPI to Tanzania in the early 1970s and reported it to be a success in terms of delivering childhood vaccines from 15% to almost 80% in the 1990s.⁶⁷ EPI was organized vertically. Funded by foreign donors and the MINISTRY OF HEALTH (MOH), the latter was in charge of planning, procuring storing and delivering EPI to the regions.

67 Innocent Semali, Understanding Stakeholder’s Roles in Health Sector Reform in Tanzania. The Case of Decentralizing the Immunization Program, Ph.D. University of Basel, Basel 2003, pp.100–101.

During the latest health sector reforms starting with the “*World Development Report*” of 1993 (WDR93), Tanzania engaged in a process of shifting managerial and financial responsibility from the national to the district levels. Former vertical programs such as EPI were not excluded from these efforts but more deeply integrated into a decentralized health system. Integration of EPI services started in 1996 and involved the transfer of procurement, storage and distribution responsibility to the semi-autonomous MEDICAL STORES DEPARTMENT (MDS), placed under the tutelage of the MOH. At district level the decentralization included the establishment of DISTRICT COUNCILS as the major political entity for the delivery of health care in the district. Whereas, before the reform, EPI responsibilities in the districts were in the hands of the District Medical Officers (DMO’s), the District Cold Chain Officers (DCCO’s) and the District Executive Directors (DED’s), EPI functions were now transferred to the Council Health Medical Teams (CHMT’s) and the DISTRICT COUNCILS. In fact, the major beneficiaries of the reform were the DISTRICT COUNCILS, who were attributed the key functions in running EPI, such as planning, resource allocation and human resources.⁶⁸ The increasing power concentrated in the hands of the DISTRICT COUNCILS worked to the detriment of the CHMT’s who, as a governance effect, saw their work restricted to such unpopular tasks as supervision tours or the management of EPI delivery. As a consequence of their attributed role, work morale dropped considerably and this in turn had an effect on the national EPI coverage, which also dropped from 80% before the reform to a mere 50% in the post-reform era.⁶⁹

Whether these effects of the health sector reform also had an impact on the implementation of the IPTi project has to remain an open question, given the fact that the personnel of the DISTRICT COUNCIL and the CHMT’s often overlapped.⁷⁰ Beyond interpretation, however, are the research team’s often uttered concerns about the poor performance of the CHMT’s. One research team member recalled that the CHMT’s either failed to regularly supervise the facilities due to “*competing activities*” in the district or – more mundane – due to lack of appropriate means of transport. As a consequence, dispensaries were often without either vaccines or drugs. On the rare occasions that the district members actually toured the area for EPI supervisions, it happened that they were packed with vaccines but did not deliver SP tablets for mkinge or that they forgot to ask the staff about “*mkinge*” interventions altogether.⁷¹ The impact of “*mkinge*” was stronger at dispensary level and dependent on the personal interactions between patients and nurses.

68 Ibid., p. 128.

69 Ibid., p. 133.

70 Yuna Hamisi, personal communication, 28.02.2011.

71 Interview with YH in Dar es Salaam, 28.02.2011.

The Micro-Level

More engrained in the memories of the nurses than the appearance of the CHMT's were the supervision tours of "Dr. Yuna." Yuna Hamisi was the project's main implementer and toured the districts in order to control whether the administration of the drugs and the registration of the doses were being done properly. These issues needed careful consideration because the administration of "mkinge" was demanding: during their training sessions, the nurses learnt that SP tablets had to be reduced to half or a quarter of their size, arranged on a spoon and sprinkled until the substance started to disintegrate before giving it to the children. This procedure required the provision of safe water and a certain degree of cleanliness. Furthermore, each consultation had to be registered in the special "mkinge" section of the clinic cards, documented in the health management information system and the drugs ordered at the district drug stores in a timely fashion. One of the nurses admitted that "mkinge" added considerably to her already impressive workload and sometimes mothers complained about too extensive waiting periods.⁷² The fact that dispensaries are notoriously understaffed did not necessarily help in this respect. With rising routine, however, these problems disappeared. The nurses had a powerful role in the "mkinge" project. In fact, it is on the micro-level of daily interactions and unequal power-relations between the dispensary personnel and the patient mothers where "mkinge" unfolded its biggest impact. The nurses were crucial in "educating" the mothers about the intervention. This was especially important given the fear and the rumors surrounding the possibly adverse side-effects of the drug SP, and the fact that the Tanzanian government replaced SP as a first-line treatment with NOVARTIS-produced "coartem" in 2006. On the first project day starting at Mingoyo dispensary

"[...] [the nurse] then led a 10–15 minute health education session, sitting between two groups of around 10 mothers with their young children. She first asked whether any of the children were sick and needed to see the doctor quickly. She then reminded the mothers of IPT in pregnancy, and asked what drug they had taken. One said "Fansidar" but the answer she was looking for was "SP", which was volunteered by another mother. She introduced Mkinge as being "sawa na dawa ya ndani – chanjo", i.e. similar to vaccines and explained that it is given after "sindano za begani (i.e. BCG, at birth) na sindano za pajani ya kwanza" (i.e. DPT-HB1), at the time of giving "sindano za pajani" at 2m and 3m (i.e. DPT-HB2 and 3) and "sindano za surua" (i.e. measles vaccine) at 9m. She mentioned that the dose was a quarter or half tablet, and that this was "dozi ndogo tu" (very small). She reassured them that there was nothing to be worried about, and that the drug would be given as directly-observed treatment at the clinic. One or two mothers replied that they

72 Interview with dispensary staff in Mingoyo, 18.02.2011.

had been listening and that they understood. [The nurse] went on to say that Mkinge had been used already in Ifakara and they now had “hamna kabisa malaria” (i.e. no malaria). She explained that the first children to get Mkinge in Lindi and Mtwara would be here, today, at this clinic, and pointed out the two posters, saying how they were real people and not hand-drawn pictures and the children looked very healthy.”⁷³

The equation of vaccines and medication did not just reverberate in such discourses of conviction but was practiced on the ground. Since the two interventions were coupled, there was no vaccine without “*mkinge*” and vice-versa. Whether or not it was current practice that the nurses even refused general treatment until the child had received its “*mkinge*” doses as one mother contended remains unclear.⁷⁴ The power of the dispensary staff to assure the administration of all three doses was also reflected in a nurse’s statement that they occasionally toured villages to detect negligent mothers.⁷⁵

Generally, the interviews I conducted with the mothers revealed that “*mkinge*” was an acceptable intervention.⁷⁶ The acceptability of the EPI vaccinations was high and “*mkinge*” was regarded as an additional benefit.⁷⁷ In addition, many of them had received SP doses during pregnancy (IPTp) and the step from IPTp to IPTi seemed only to be a gradual one. The positive attitude about this new intervention was sustained even when the children once again got sick with malaria during or after the “*mkinge*” interventions: in this case, the mothers reported that malaria came back in milder forms.⁷⁸

73 (AHH-MB), Mkinge, Mkinge, Start of Piloting of IPTi in Lindi and Mtwara Regions, 14th-17th Feb. 2005, Note for the Record, Preparations for Training of Facility Staff, p. 4.

74 Interview in Mingoyo, 18.02.2011, The perception, has also been reported by Robert Pool et al., The Acceptability of Intermittent Preventive Treatment of Malaria in Infants (IPTi) Delivered Through the Expanded Programme of Immunization in Southern Tanzania, in: *Malaria Journal*, Vol. 7, No. 213, 2008, pp. 1–11, here: p. 10.

75 Interview with staff in Mingoyo, 18.02.2011.

76 Interviews in Mingoyo, Mnolela and Nyengedi, 18.02.2011, 21.02.2011, 22.02.2011.

77 Robert Pool et al., The Acceptability, p. 10, for a in-depth analysis of the acceptability of IPTi see: Adiel Mushi, *Reaching the Poorest Children in Rural Southern Tanzania. Socio-Cultural Perspectives for Delivery and Uptake of Preventive Child Health Interventions*, Ph.D. Study London School of Hygiene & Tropical Medicine, London 2009, for opposing views concerning the perceptions of SP see: Vinay Kamat, Cultural Interpretations of the Efficacy and Side-Effects of Antimalarials in Tanzania, in: *Anthropology of Medicine*, Vol. 16, No. 3, 2009, pp. 293–305.

78 Interviews with mothers in Mingoyo, Mnolela and Nyengedi.

In sharp contrast to the vaccine trial in Idete, the population of Mtwara and Lindi had a different perception of this intervention. What made IPTi easily acceptable to the local population was that the research project did not present itself as research altogether but more as a supplementary daily routine. That is why IPTi was not able to divide villagers in those parts who could abstain and those who “*offered*” their offspring for a small indemnity. Science in this latter example did not create laboratory conditions in a futile effort to keep every factor under control but remained in the background, observing how an existing health system performs when a new element was added to it. The researchers concluded that IPTi-SP was safe, highly cost-effective and “*showed a reduction in the prevalence of P. falciparum infection and of anemia, suggesting that existing levels of drug resistance were not preventing a beneficial effect of IPTi.*”⁷⁹

Moreover, IPTi could be handled by weak health systems, IPTi reaching a similar coverage rate to EPI.⁸⁰ The trial was designed so that the efforts by the district health personnel would continue even after the research team withdrew from sight. Not surprisingly for the nurse in Mingoyo dispensary, the question about what changed between “*mkinge*” as a project and “*mkinge*” as it is practiced today was then difficult to answer. The major change for her was that “*Dr. Yuna*” did not monitor the activities anymore, which resulted in diminished adherence to the project.⁸¹

The effectiveness trial in Southern Tanzania contributed a small piece of “*evidence*” to the mosaic of all the consortium trials taken together. Towards the end of the first decade of the new millennium, the different results of the various IPTi studies were published in the relevant scientific journals. The picture they revealed was marked by heterogeneity as far as the pressing questions of safety, efficacy, resistance and probable rebound effects on malaria were concerned. The scientific community had anticipated such a fragmented picture. For policy makers, however, science’s various answers to what was considered as one problem was nothing which could easily be translated into health policy.

Stumbling Block of Governance: The Global Level

The consortium scientists were aware of the likelihood that different IPTi trials conducted in different settings and with different endpoints could generate different results as far as efficacy and safety were concerned. As one of the consortium members mused:

79 Joanna Schellenberg et al., Community Effectiveness of Intermittent Preventive Treatment of Infants (IPTi) in Rural Southern Tanzania, in: American Journal of Tropical Medicine and Hygiene, Vol. 82, No. 5, 2010, pp. 772–781, here: p. 780.

80 Ibid., p. 779.

81 Interview in Mingoyo, 18.02.2011.

*“It is likely that the ongoing and planned research studies will demonstrate considerable variation in the efficacy of IPTi in different settings, and that some unexpected safety concerns may arise. The purpose of a WHO policy recommendation will, therefore, be to provide malaria-endemic countries with a comprehensive and balanced appraisal of the benefits and limitations of IPTi in a range of epidemiological settings.”*⁸²

It was exactly the above-mentioned “considerable variation in efficacy” and the “unexpected safety concerns” of IPTi using SP that hampered the smooth translation of science into policy. After reviewing the essential information on the different trials conducted by the IPTi consortium, the WHO was not eager to come up with a clear policy recommendation for IPTi. History for sure played a crucial part here: too often in the course of the failed attempt to eradicate or contain malaria in Africa, the WHO too hastily endorsed strategies which had no effect on containing the disease (see DDT as the most infamous example). As far as IPTi as a novel strategy was concerned, the WHO detected several risks referring to the drug SP, as well as to the efficacy of IPTi. There was a certain risk that SP caused severe skin reactions of which the so-called “Steven-Johnson-Syndrome” (SJS) was the most dangerous.⁸³ Furthermore, the efficacy figure of the trials under consideration proved to be highly fragmented. Just to reiterate: while the trial in Ifakara showed a protective efficacy against clinical malaria of 59%, the data gathered from the other trial sites oscillated between 20% to 33%, out of which there emerged an overall efficacy picture against clinical malaria of 30%.⁸⁴ Perhaps even more pressing than the efficacy figure was the question whether this effect on the disease is sustainable in the long run or subject to a rebound effect on clinical malaria.⁸⁵ Three out of all the trials showed an increasing number of anaemia episodes during the 8 months after the last dose of IPTi-SP.⁸⁶ As we have seen, several of the mothers interviewed at the dispensaries of Mingoyo, Mnolela and Nyengedi confirmed the continuing suffering of their children from malaria but suggested that these attacks were now less severe than they used to be. The pooled analysis of all the trials, however, showed that “*there were no significant rebound episodes of clinical malaria, anemia or hospital admissions...of the 5 month*

82 (DMT), IPTi, Jane Crawley, Planning for Success, pp.3–4.

83 Ibid., WHO’s Position on the IPTi Strategy. Implications for Policy, June 2007, pp. 1–8, here: p. 3.

84 Ibid., The Facts, November 2007, pp. 1–3, here: p. 1.

85 “A rebound is normally said to have occurred when the incidence of clinical malaria in intervention-recipients is significantly higher than the contemporaneous incidence in the control arm”, see: (DMT), IPTi, David Schellenberg, Response to Gates Foundation, 30.09.2009, pp. 1–4, here: p. 3.

86 This was the case for the Navrongo, the Kumasi and the Tamale trial, see: (DMT), IPTi, – The Facts, p. 2.

period after the IPTi schedule was finished.”⁸⁷ The WHO was nevertheless not all that convinced. Despite all the efforts from the consortium’s side to bridge possible gaps between science and politics, the WHO’s *Technical Expert Group on Preventive Chemotherapy (TEG)* concluded in 2007 that there

*“[...] remain significant safety concerns, particularly regarding the risk of severe skin reactions. Taking into account these safety concerns when IPTi would be administered to otherwise healthy children, the duration of protection against malaria, the uncertainty over the magnitude of the protective effect against anaemia and severe malaria, the uncertainty concerning the efficacy against highly SP-resistant parasites and the optimal dose and timing of administration, the committee cannot recommend general deployment of SP-IPTi.”*⁸⁸

The WHO’s position caused incomprehension among the scientists. The whole research process was geared towards a fast propagation of IPTi as a new and effective tool against malaria and it was clear to everyone that AFRICAN NATIONAL MALARIA CONTROL PROGRAMS would never adopt the strategy without policy support from the WHO. The consortium and especially the BMGF needed visible results because the logic of humanitarianism was less made up of abstract science than of interventions of high publicity. Thus, in the eyes of the scientists, the reaction of the WHO could do nothing but lay bare that *“international health policy making is not necessarily an evidence-based process.”*⁸⁹ Putting aside a public health strategy, which according to the scientist’s view was effective, safe, cheap and relatively easy to deliver through the already existing EPI system, could barely pass uncontested. Their answer to the members of the GLOBAL MALARIA PROGRAM (WHO-GMP) was therefore straightforward: the WHO not only misinterpreted the scientific facts but also failed in their normative role as a guide to MINISTRIES OF HEALTH in Africa in setting sound national health policy.⁹⁰ To put it in the words of a scientist involved:

87 Ibid.

88 WHO, Report of the Technical Expert Group (TEG) Meeting on Intermittent Preventive Therapy in Infancy (IPTi), Geneva, 8–10 October 2007 Geneva, 8–10 October 2007, pp. 1–12, here: p. 7, <http://www.who.int/malaria/publications/atoz/tegconsultiptionoct2007report.pdf> (accessed 07.03.2011).

89 (DMT), IPTi, David Schellenberg, Marcel Tanner, Annual Progress Report. Community Effectiveness of Intermittent Preventive Treatment delivered through the Expanded Programme of Immunisation for Malaria and Anaemia Control in Tanzanian Infants, 01/2006 – 12/2006, pp. 1–22, here: p. 13.

90 Ibid., The Policy Review Process at the World Health Organization’s Global Malaria Program – has it gone off the tracks?, p. 1.

*“In the past, WHO has been criticized, unfairly perhaps, for making policy decisions without a sound science base – often in difficult circumstances where no substantial data were available. With IPTi, WHO has been presented with an unprecedented science base for considering this tool for policy adoption. It remains unclear why the policy process at WHO around IPTi appears to have been abandoned, ignoring substantial and well documented body of data.”*⁹¹

The consortium’s claims did not pass unnoticed: two years later the WHO’s *Technical Expert Group* once again approached the issue and they marveled at the new scientific evidence assembled on IPTi. The new information that accounted for a change in the WHO’s mindset included a) an analysis conducted by the consortium on the severe skin reactions that had been associated with Sulfadoxine-Pyrimethamine b) two additional randomized and placebo-controlled trials that investigated the safety and efficacy of IPTi and c) the experience of two implementation studies conducted by UNICEF as well as the IPTi Consortium.”⁹² The new evidence suggested that the skin reactions formerly reported in two of the trials could not be classified as severe adverse reactions (SAE); that there were no adverse effects of SP-IPTi on infants’ serological responses to EPI vaccines either and that the possible rebound effects on malaria were not to be encountered in the pooled analysis. Taking all this together, in 2010 the WHO could recommend IPTi as a new intervention against *P. falciparum* in sub-Saharan Africa in areas with “*moderate to high malaria transmission and where parasite resistance to SP is not high.*”⁹³

The global “*partnership*” in malaria research – the very marker of the new millennium – is not resistant to vested interests and is prone to delay health policy making. One of the major characteristics brought in by the new global charities and the sheer amount of money they distribute is that malaria research is now driven not just by the need for quick scientific results but by the urgency of translating science into policy. African policy makers are included in the scientific process. They are informed about the research proj-

91 Ibid., Response to WHO-GMP on Statement on IPTi policy process, 28.06.2007, pp. 1–2, here: p. 2.

92 WHO, Report of the Technical Consultation on INTERMITTENT PREVENTIVE TREATMENT IN INFANTS (IPTi), Technical Expert Group on Preventive Chemotherapy, 23rd–24th April 2009, WHO/HQ, Geneva, Switzerland, Room D46025, 2009, pp. 1–11, here: p. 2, <http://www.who.int/malaria/publications/atoz/tegconsultiptiapr2009report.pdf> (accessed 07.03.2011).

93 WHO, Policy Recommendation on Intermittent Preventive Treatment During Infancy with Sulphadoxine-Pyrimethamine (SP-IPTi) for Plasmodium Falciparum Malaria Control in Africa, 2010, pp. 1–3, here: p. 2, http://www.who.int/malaria/news/who_policy_recommendation_IPTi_032010.pdf (accessed 07.03.2011).

ects done in their respective countries and they are invited to advance their opinion in several “*stakeholder meetings*.” But what is their role in the policy process itself? How do the above-mentioned discussions reverberate in the TANZANIAN NATIONAL MALARIA CONTROL PROGRAM (NMCP) and what is its members’ understanding of the contribution of science and research to the designing and implementing of sound malaria control strategies deployed on a national scale?

Off the desks – The National Level

Together with the NIMR, the IHI has privileged access to the highest health policy levels in Tanzania. This is mainly due to IHI’s international contacts – especially to the STI – and the tight network of interpersonal relationships that has been woven over the past couple of years. Just to mention a few: Haji Mponda, the current minister of health, was working under the KINET project (a research project on Insecticide Treated Nets using a social marketing approach running between 1996 and 2000 in Kilombero and Ulanga districts) and Hassan Mshinda, the director general of the TANZANIAN COMMISSION FOR SCIENCE AND TECHNOLOGY (COSTECH), was also one of Marcel Tanner’s students and director of the IC following Andrew Kitua. These close interpersonal connections which exist between the STI and Tanzanian scientists working at the highest levels of the Tanzanian health system has of course both positive and problematic aspects. On the one hand, these Tanzanian scientists embody the success of STI’s investment in manpower and training schemes, which over the years has systematically enabled African scientists to write a Ph.D. in London and Basel and to further pursue their academic careers. On the other hand, there is a certain danger that these personal features of partnership are not very long-lasting, explicitly because they follow a interpersonal rather than a “*bureaucratic*” logic.

Members of the NMCP do have a very positive attitude towards participatory approaches. According to one of its members, the outstanding novelty is that with the appearance of the Roll Back Malaria Partnership “*we are now working as partners*” to fight the deadly disease.⁹⁴ The question about whether the Tanzanian government is not too easily belittled in all the tangled mass of foreign money, international donors, advocates and advisers, the interviewee I encountered in the NMCP answers with the routine of someone who has been used to being asked this question several times. “*The Tanzanian government is contributing a lot to the efforts*” she stresses. The government pays the salaries of the NMCP staff and provides fuel and electricity for the daily business.⁹⁵

94 Interview at the NMCP Dar es Salaam, 08.02.2011.

95 Ibid.

IPTi-SP has not yet found its way into the minds of the members of the NMCP. The reason for this is not so much the WHO's reluctance to recommend IPTi as national policy in African countries, but more deeply rooted in the ambivalent governance structure described previously. During the time of the IPTi in Southern Tanzania, there was another consortium-sponsored IPTi trial conducted by NIMR (Tanga Center). Comparing a bunch of different drugs for IPTi, the NIMR team could not find any protective effect of sulphadoxine-pyrimethamine against clinical malaria in infants.⁹⁶ Such differing scientific results from different epidemiological settings are not easy to cope with by the NMCP, which draws up policies for the whole country:

“Yes they also have IPTi results but these results are not the same...They are giving us different information, so as a policy maker, what would you do? It is the task of them to settle, to go back, and harmonize and to see how best they can inform the government. Who has done the right job? What went on during the fieldwork? What is it what is different in the other part of the country? From Mtwara or from wherever? So we need to be guided. You cannot receive different information.”⁹⁷

Health policies are necessarily abstract and gloss over different local situations. In other words, science has to get detached from local characteristics before being translated into health policies. Bruno Latour famously described the process of creating scientific “facts” as a process of “stabilization.” According to him, scientific objects are affected by different and diverging statements and conversational exchanges. Over time an inversion of language and reality can be observed for “more and more reality is attributed to the object and less and less to the statement about the object. Consequently, an inversion takes place: the object becomes the reason why the statement was formulated in the first place.”⁹⁸ By analogy, one can say that the process of stabilization has not yet divorced IPTi from the different statements it is exposed to. It has not yet become a scientific fact, living a life outside interpretation. The policy-makers of the NMCP still related the different results about IPTi to a “mistake” in the system of scientific production. The scientists have to go back in order to find out what “went wrong” during fieldwork and to haggle over “who probably has done the right job” in order to be of any use to the NMCP. Such a “rediscovery” of science’s unambiguity is however rare. As another long-serving member of the NMCP clarified:

96 R. D. Gosling et al., Protective Efficacy and Safety of Three Antimalarial Regimens for Intermittent Preventive Treatment for Malaria in Infants. A Randomized, Double-Blind, Placebo-Controlled Trial, in: *Lancet*, Vol. 374, 2009, pp. 1521–1532.

97 Interview at the NMCP in Dar es Salaam, 08.02.2011.

98 Latour, Woolgar, *Laboratory Life*, p. 177.

“We cannot say now let us go to the southern zone we do this and in the northern zone, we do this, no, we take it that once it [an intervention, LM] is effective that one will also be effective in every zone, you see? So, since the researchers have got the knowledge of knowing how to go about doing research which will be representative of the country, we normally don’t want to question the credibility of the research and the methodology and the like. We say, we have this problem, can you please do this for us, they come upon with the budget, we give them the money and they do it. And fortunately, we never had experienced problems that the research on this thing did not materialize in the southern part but did work in the northern, we never experienced that kind of problem, you get it? And if you see the interventions, malaria control is not defined that this is for the southern and this is for the northern, it will cut-across all the regions, all the zones, all the areas in the same package, the same package, you see?”⁹⁹

The reason why IPTi is banned from the desks and minds of NMCP staff is not just due to contradictory scientific information but also because of the parasites’ increasing resistance to SP. This phenomenon has attracted in-depth attention and already at the moment of the drug’s introduction as a first-line treatment of malaria, it was certain that this was not going to last for ever.¹⁰⁰ The changes of SP as a first-line treatment did not, however, affect its preventive use in Intermittent Preventive Treatment during pregnancy (IPTp), which has already been adopted as a national policy. To think of IPTp as a precedent for IPTi was not something the NMCP could easily get chummy with:

“SP [...] we don’t know even if it is working well, even for IPTp. Probably it does but we are not monitoring because we don’t have that capacity. We don’t have a lot of information on IPTp and on SP for IPTp. How do we monitor this drug because we cannot do it at national level. It has to be done with the research institutions [...] well, SP worked, it works for parasitaemia in pregnancy but then does it still work even today, we don’t know. That is the challenge I think.”¹⁰¹

The same institution that introduced IPT-SP as a national policy for pregnant mothers is more than cautious in extending the intervention to infants. Their reluctance should not be dismissed as “irrational” behavior. What it reveals, however, are the contradictions and probably the impotence of the NMCP in controlling malaria through single technical approaches.

99 Interview at the NMCP in Dar es Salaam, 10.02.2011.

100 Joanna Schellenberg, personal communication.

101 Interview at the NMCP in Dar es Salaam, 08.02.2011.

UNPACKING THE LABORATORY

The ultimate aim of the chapter was to shift the analysis from the micro-level of scientific practices, which have dominated the previous chapters of the thesis, to the wider question of how scientific results can be transformed into national health policy. One of the major difficulties emerging from the example of the failed malaria vaccine candidate *SPF66* was the problem of standardization. Even though the standardization of trial protocols and trial populations was seen as the basis for the successful execution of the *SPF66* trial in order to finally come up with an effective tool against malaria, the results from various trial sites around the world yielded results far too heterogeneous to have rendered *SPF66* a possible solution in fighting the disease. In the special case of *SPF66*, there is good reason to suspect that the WHO and the pharmaceutical industry undermined the efforts, but it is suggested here that even if all partners had worked together, the complexities of the local malaria situations would not have allowed for a one-fits-all technology.

Perhaps even more than the *SPF66* example, the excursus on *IPRI* showed that health research and policy making in the new millennium is deeply enmeshed in a governance structure that consists of global charities, scientists, pharmaceutical industries and international organizations. These new features of what is euphemistically called “*health governance*” invite us to more generally reflect on the relationship between science and policy making in the era of a new humanitarianism. More than anything, health governance stands for dissolving boundaries between science and politics. As the example of *IPRI* in Mtwara and Lindi regions has shown, scientists very much intrude into the realm of politics: they introduce new elements into the health system (take the amended clinic card for instance) and try to change health performance in a long-lasting manner. The example of the implementation research has shown, however, that the scientific and the policy level get separated again when the issue of the implementation of *IPRI* results on a national scale was at stake. The different results gathered at different places in the world and the interplay of local, national and global actors, striving for national health solutions, renders the “*partnership*” structure a shaky concept.

CHAPTER 8

Science and Decolonization Revisited

This study was an attempt to analyze the history of Swiss science and technology at two different places in Africa during the period of decolonization. The guiding hypothesis was that science and the process of decolonization – understood as a historical, political process as well as an analytical exercise – were mutually reinforcing. The CENTRE SUISSE DE RECHERCHES SCIENTIFIQUES (CSRS) in Côte d’Ivoire, and the former SWISS TROPICAL INSTITUTE FIELD LABORATORY (STIFL) in Tanzania served as prisms that not only allowed one to grasp the variety of scientific practices and encounters in different colonial and postcolonial settings but to assess more generally Switzerland’s position within the political landscape of the two African countries. This chapter serves as a general summary of the findings presented in the previous pages. Following again a chronological order, at least four points are worth recalling:

COLONIAL SCIENCE

Côte d’Ivoire and Tanganyika had different roles to play within the larger framework of the French and British Empires. While the former, rich in natural resources, was of vital political and economic importance for metropolitan France, the unprofitable trust territory Tanganyika was not London’s major imperial pride. Despite their different ranks on an imperial scale, the two African territories shared similar experiences. For instance, both were drawn into a process that has been described as a “*second colonial occupation*” after WORLD WAR II, when warfare had depleted the last resources in France and Britain and supplies from overseas were again bitterly needed for metropolitan consumption. Science and technology played an important part in the “*valorization*” of the colonies. In the 1940s, and for the first time, Paris and London released substantial metropolitan funds for colonial research and development. There are not many places in sub-Saharan Africa that literally

embody the value attached to science and technology than Adiopodoumé near Abidjan. In 1945, Adiopodoumé became a center within the periphery. The French OFFICE DE LA RECHERCHE SCIENTIFIQUE ET TECHNIQUE D’OUTRE-MER (ORSTOM) transformed the village into one of the major scientific sites in sub-Saharan Africa. It attracted substantial funds from Paris and high-ranking scientists weaved the politico-scientific web between Paris and the political elite in Abidjan. Adiopodoumé became the very emblem for a change in France’s imperial policy which tried to curb political resistance within Côte d’Ivoire and instead provided an image of what could be expected from the Franco-African ties. Science and development played an important part in Tanganyika too. However, similarities between the two territories diminish somewhat when different regions within the colonies are set against each other. Compared to Adiopodoumé, rural Ulanga (Mahenge) district in Tanganyika never entered the imagination of imperial social reformers in Britain to the same degree as Adiopodoumé did in Paris. In the vast district, many day-trips away from the country’s main urban centers, the art of governing was left to district commissioners ruling “*indirectly*” through local chiefs. The depth of their imprints on the political and economic history of the district was highly contingent and dependent on the individual’s personal efforts to implement policies drafted in distant colonial offices. Still, the remoteness of the units of comparison to the imperial centers, the money invested or the importance attached to certain scientific project does not say very much about how Western science and technology was experienced locally. While ORSTOM, as a specific project of domination, was too exclusive and too much of a foreign body to have had any impact on the local population, the attempt to contain the spread of sleeping sickness in Ulanga did very much to disrupt the life of people living in the area. Historian Michael Worboys once described that while stopping the disease from spreading over different colonies, the British laid emphasis on the fly, the Belgian on the movement of humans and the Germans on the trypanosome.¹ However, as we have seen, district commissioner Arthur Theodore Culwick very much promoted a spatial approach to the disease, attempting to “*concentrate*” people into sleeping sickness settlements and thus controlling human movement and reducing man-fly contacts. Whether or not these interventions really had an effect on the spread of the disease was not much of a concern in Culwick’s eyes. For him, the economic and social benefits of people living closer together ruled out any questions of the interventions’ direct impact on the epidemiology of the disease. Thus, health policy in Ulanga had become the model for social policy, a concept that would linger on in postcolonial times. It would be a misinterpretation to see colonial health policy as a homogenous set of principles

1 Worboys, *The Comparative History of Sleeping Sickness*.

and actions implemented along the dichotomy between government agents versus rural populations. Not only was there a gap between “*technocrats*” and “*social reformers*” within the colonial health department. Moreover, the resettlement of large parts of Ulanga’s population afforded the cooperation of local chiefs without whom the district authorities would have lacked the very means to conduct such large-scale projects of social engineering.

The different geographical constituencies, historical legacies and social networks that operated in Adiopodoumé and Ifakara very much determined the character of Swiss science unfolding at the two sites. Largely unaffected by the atrocities of war and devoid of any colonial possessions, in the decade after 1945 Switzerland became a constant player on the imperial stage. The newly emerging field of tropical science – described as a conglomerate of various sub-branches and best captured in the history of the STI – helped to forge new connections to the major imperial powers in Africa and finally led to the creation of two Swiss research laboratories in Adiopodoumé and Ifakara. Recalling the first years of their operation, three major points are worth repeating: Firstly, studying the various scientific practices at these two places, it became evident that scientific practices were too heterogeneous to allow for the notion of “*colonial science*” to be upheld. Beyond the fact that Thierry Freyvogel and Fritz Haerdi both worked in the same location in Tanganyika, their activities of studying malaria parasites in monkeys or investigating the vernacular names of local plants had nothing much in common. Diversity was also the major characteristic of Swiss science as it was practiced in Côte d’Ivoire. Science at the CSRS did not necessarily follow a tight agenda nor was it attempted towards continuity. Rather, for more than forty years, each of the CSRS directors arriving at the Ebrié lagoon had his own research agenda according to his educational background or scientific preference. Yet, especially during the 1950s, Switzerland’s scientific efforts culminated in the wish to assemble large collections, to describe yet unknown species and to inventorize the tropics. Secondly, Switzerland’s flair for substantial collections did not comply with the concepts of French science after WORLD WAR II. As it seems, there were not only very spatial differences in scientific practices. Gazing at different “*national*” cultures within the same defined space makes it possible to discern also temporal discrepancies in the production of colonial knowledge. In the eyes of ORSTOM, Switzerland’s fervor for assembling collections and sending the items back home for scientific scrutiny or enriching museum displays belonged to a period in the history of colonial science which was already over or at least incompatible with a more technology-driven approach of late colonialism from which also Africans should benefit. Thirdly, Swiss colonial science does not necessarily fit the image of a “*tool of empire*” which was assumed to help sustain the overall colonial project. Arguably, collecting scientific specimens and rendering the unknown tropical world meaningful according to a Western epistemology

are forms of cultural domination that sustained the colonial project.² On the other hand, one has to acknowledge that during the late 1950s Swiss scientific activities were not only doomed to failure but that their impact on the local African population remained rather small. The weakness of Swiss science, again, comes to the fore when looking at the mutual relations between the French and Swiss scientists in Côte d’Ivoire. It was not only that Swiss scientific activities needed approval by the French neighbor. Switzerland’s subordinate position was also tangible in every aspect of social life, beginning with the comparatively small budget and ending with the deeply resented conviction about their incapacity to settle the social obligations in the colony. That notions of “smallness” and “weakness” had a firm place in the historical repertoire of Swiss self-portrayal and could be deployed strategically when needed, should not obstruct the fact that colonial societies did not operate along the “colonizer”-“colonized” divide but displayed various shades of grey within the dominant white society. This finding is important also for methodological reasons for it implies that, in order to understand Switzerland’s history in a wider imperial context, it is not sufficient to look at the transfers between “metropoles” and the “peripheries” and vice versa, but also at transfers within empires, single colonies, and small social networks within specific colonies.

DEVELOPMENT

Science and health became important reference points within the political and symbolic borders of the “new” African nations after independence. More than anything else, investment in these fields was considered a rupture with the colonial past and African leaders such as Julius Nyerere or Félix Houphouët-Boigny were eager to exploit the symbolic value of these topics and sent strong signals to their electorate that the wind of political change would soon materialize in better education, health care and scientific infrastructure. Switzerland had a special role to play within the process of decolonization. The formal ending of the British and French Empires transformed the country’s weak position within those empires into one of strength in the years after African independence. The country’s political neutrality and its untainted past as far as colonial aspirations were concerned accounted for Swiss development “experts” being highly esteemed guests at the round tables where Africa’s future role was discussed after colonialism withered away. Switzerland’s problem

2 Nicholas B. Dirks, Introduction. Colonialism and Culture, in: Dirks (ed.), Colonialism and Culture, Michigan 1992, pp. 1–25, here: p. 3.

was that the Empire could not simply be switched off, like blowing out the candles of a somewhat outmoded candelabrum. As the example of Côte d'Ivoire has shown, the forces of colonialism, the paternalistic system of inter-personal relations imposed by France were still very much at play after Ivoirian independence and beyond. The perception of Côte d'Ivoire remaining under French tutelage very much narrowed the room to maneuver of Swiss players. Members of the DIENST FÜR TECHNISCHE ZUSAMMENARBEIT (DFTZ), the official body of Swiss development aid as it emerged in 1961, were more than cautious to embark on substantial development projects in the West African country because they feared possible political consequences imposed by France. Swiss science very much experienced and resented both French influence and Swiss discretion. While the period of colonialism was marked by a "*Gleichzeitigkeit der Ungleichzeitigkeit*" [synchronicity of the asynchronous] in colonial scientific practices, the two centers' scientific styles collapsed more and more into each other after independence, so that the boundaries between Swiss and French scientists diminished altogether.

The example of Tanganyika stands not only for a different trajectory of decolonization but also for a range of different possibilities for Swiss foreign policy. From 1964 onwards, Julius Nyerere actively forged new political relations with a range of Asian and European donor countries that gradually came to replace British domination. In Tanzania, Switzerland found one of its most rewarding spots for development assistance. In the first years of the 1960s, development activities were the business of private actors. Members of the STI and the pharmaceutical industry were able to present the DFTZ with already pre-packaged development plans, especially in the realm of health care where Switzerland's official development agencies had no expertise whatsoever. Perhaps the most important lesson learned by the empirical evidence laid out in the previous chapter was that development was not just the application of Western technology in countries of the Third World, nor was it just colonialism by other means, as it is often represented in the chef d'œuvres of development thinkers such as Wolfgang Sachs or Arturo Escobar.³ As the example of the rise of social medicine in Tanzania has shown, Tanzanian actors were able to shape the outlook of Swiss development projects on the ground, which in turn triggered changes in development concepts back in Switzerland. More importantly, development aid was not an instrument to prevent communist ideology from spreading in Africa. Swiss development actors not only embraced African socialism as it was formulated by Nyerere but they also became what Michael Jennings has called "*surrogates of the state*", spreading the socialist

3 Sachs, *The Development Dictionary*, Escobar, *Encountering Development*.

ideology in those remote areas where the Tanzanian state did not reach.⁴ It is therefore necessary to deconstruct COLD WAR ideology and to venture the more historically informed assumption that the “COLD WAR” was not so much the overarching ideological principle that structured relations between the West and the East or the West and the South. Rather, historical actors were either capable or not of exploiting the meta-narrative of a bi-polar world order depending on their own actual interests.

MEDICAL RESEARCH AND DEVELOPMENT

In the period between 1970 and the mid-1990s, medical research and development ideologies converged. True, development always impinged on questions of knowledge: the field was (and still is) populated by many counselors whose expertise derives from their ability to reduce complex economic relationships into neat statistics or to work out economic models that would serve as guidelines for future action. The point here is more that during this time span, Swiss basic medical research in Africa was regarded as being compliant with overall development aims. This became obvious in the case of the STIFL which at the beginning of the 1980s – and guided by a broader understanding of disease causation – started to work more thoroughly both together with and within African societies. The step from the laboratory to the field taken in the name of development and PRIMARY HEALTH CARE (PHC) entailed new forms of experimentation. The novelty of these practices gained its contours against the backdrop of the long tradition of the laboratory being a more or less confined space where scientific facts were produced in order to apply them to the wider society later. Operational research in Africa was different for it inserted new elements into African society, while the effects were studied at the very same time. Africans were not just passive objects of Western science. The impact of Swiss science in rural Ulanga district increased exponentially to the extent to which African researchers were attached to Swiss research teams and on the basis of new collaborations sought with Tanzanian institutes and the population. The events in the 1980s show that the concept of experimentation and the concept of development have very strong affinities. Both hint to a yet unknown state in the future; both trigger transformative processes and both strive for a “*systematic production of novelty*.”⁵ However, medical research could also be about the “*systematic production of difference*.” The history of the NESTLÉ FOUNDATION in Côte d’Ivoire reminds us that powerful transnational corporations and their “*humanitarian offshoots*” were not bound by the same restrictions as political actors. The close relations between the food company and the Ivoirian government rendered the launch of long-term research projects in the African country an easy task. For NESTLÉ, notions of “*science*” and “*development*” were only meaningful so as to camouflage more mundane economic interests. NESTLÉ researchers on

4 Jennings, *Surrogates of the State*.

5 Pickstone, *Ways of Knowing*, p. 13.

the ground were forced to establish protein deficiency as one of the major health concerns in the rural countryside which – as a scientifically proven fact – would in turn provide a strong argument for the selling of protein-rich nutrients. It is not that malnutrition was not a problem in Côte d’Ivoire altogether, but that it was a problem of poverty encountered in the outskirts of Abidjan and not in the rural areas. The insight provided by the particular history of the NESTLÉ FOUNDATION is not meant to be a political manifesto against the company but rather to hint to the diverging voices and the inner struggles between NESTLÉ ALIMENTANA S.A., the NESTLÉ FOUNDATION and the individual researchers working in the field. Moreover the history of nutritional research points to the more general problems of research ethics that has only superficially been hinted at throughout the study. This shortcoming cannot be compensated here. It must suffice to state that medical research in the 1970s and 1980s was strongly biased towards “*innovation*” and “*implementation*”, without paying enough attention to the important process of “*validation*” of research results.

SWITZERLAND’S LATE DECOLONIZATION

Though different in many aspects, the history of the two African countries especially in the 1970s and 1980s shared similar traits. This is especially true with regard to the economic and political crisis that cast its long shadow on Côte d’Ivoire and Tanzania and it is worth speculating along with historian Frederick Cooper whether or not the year of the oil shock and worldwide recession left a stronger imprint on the fate of African societies than did the fanfares of independence a decade earlier.⁶ The period of structural adjustment, market liberalizations and the two countries’ staggering dependence on money-lenders such as the IMF and the WORLD BANK, marked the beginning of what James Ferguson called “*transnational governmentality*.” Instead of depicting African states as “*failed*,” “*weak*,” or otherwise “*hollowed out*,” transnational governmentality referred to a new mode of political action that triggers new forms of collaboration between private and public actors across national borders and the outsourcing of former state functions to innumerable NGO’s operating in the field of African politics.⁷ The history of the two Swiss scientific institutions in the 1980s and 1990s is a strong empirical case that strengthens this view. Running counter to the discourse about the “*lost development decade*” at home, by then the STIFL was more deeply integrated within a Tanzanian health system, as well as within a global health network, and scientific activities on the ground became more intense. Being part of a transnational political apparatus does not necessarily imply that national priorities shifted out of focus. However, the examples of the recent history of malaria research in Tanzanian have shown that the process of translating scientific results into public health action could seriously be hampered by the diverging interests of the several actors involved. In other words, what

6 Cooper, *Africa since 1940*, p. 87.

7 Ferguson, Gupta, *Spatializing States*, p. 990.

will be necessary for future research is not only to hint at new forms of transnational governmentality but to shed closer light on the functioning and the power inequalities within these policy networks.

The political changes on a global scale also became evident in the case of the CSRS. With the forced retreat of ORSTOM from Côte d’Ivoire and France turning its back on the former colony, the CSRS emerged as the sole actor on the scientific stage in Adiopodoumé. However, the end of the “colonial pact” between France and Côte d’Ivoire maneuvered the CSRS into a difficult position for the institution was obliged to jettison the view of science serving mainly Swiss purposes, to open the CSRS to African scientists and to seek new collaborations with African as well as international institutions.⁸ Seen from the perspective of African researchers, the process of “Africanization” did not necessarily mean taking over a European institutional or cultural legacy but being molded into new participatory models by then termed “research partnerships.” Though more or less a euphemism for continuing power-imbalances between Swiss and African researchers in the beginning, the partnership concept became more balanced during the second half of the 1990s. It was at this time when the STI became more involved in the overall policies of the CSRS. Drawing from the experiences in Tanzania, the STI had a strong interest in collaborating with the CSRS, especially in the fields of public health or veterinary sciences. In 1997, Marcel Tanner, by then director of the STI, became member of the Commission of the CSRS and one year later its president. His was a strong wish to transform the CSRS into a centre of excellence, equal to what happened with the IHI in Tanzania. A series of legal arrangements facilitated this ambitious task. In 1998, undersecretary of State, Charles Kleiber, and minister of research and education, Francis Wodié, signed an “accord cadre” on scientific cooperation which put an end to the times of legal uncertainty the CSRS had been living in since the decline of the “ORSTOM era.” The legal agreement obliged the Swiss party to train Ivoirian scientists within the framework of scientific projects and to provide the scientific infrastructure and brought major advantages in form of tax exemptions in return. The “accord de siège” two years later was even more significant in that it fostered the partnership idea and granted

8 Supported by the companies NESTLÉ and SYNGENTA, a new agricultural and health research site was inaugurated in Bringakro (central Côte d’Ivoire) in 1992 in the context of the research axis lead by Niklaus Weiss from the STI.

the CSRS quasi-diplomatic status.⁹ In 2005, Gueladio Cissé, a researcher originating from Mauritania, was named head of the CSRS. His election proved to be crucial during the years of crisis during which questions of who is an Ivorian and who is not were fought out in violent ethnic conflicts. Since 2000, more than 20 MSc and 25 Ph.D. students from African and European universities have graduated from the CSRS.¹⁰ At the same time, the CSRS was organized as an international trust modeled after the successful governance structure used by the IHI, where African partners hold the majority in the board of governors.

Thus, as it appears today, both the IHI and the CSRS have a strong impact on the societies in which they operate. Both institutes attract the most committed African and European researchers, who try to contribute to the improvement of the health situation or to offer scientific solutions to pressing societal problems. The notion of the “*margins*” that appears in the title of this thesis thus not only serves as to hint to the ways of how marginality was produced in the past but leads to the conclusion that the two scientific institutions in Africa have always been, albeit to different degrees, at the very center of Swiss science.

WRITING A SWISS HISTORY OF SCIENCE IN AFRICA

The last point mentioned above invites us to reflect on some methodological issues about writing a Swiss history of the sciences and to open up new venues for future research. The thesis was an attempt to follow the development of formerly Swiss scientific institutions not from within the narrow confinements of the “*nation*” but from the “*field*”, where science has been practiced, re-shaped and from where new ideas travelled back “*home*.” Deploying such a view not only requires a history of the sciences that can be connected to

9 The normative concept of a research partnership has been made the backbone for a series of new regulations and funding mechanisms in a broader institutional setting in Switzerland. In 1998 the “*Commission for Research Partnership with Developing Countries*” (KFPE) published its 11 principles for research in partnership that served as a normative guideline and focused more strongly on the research process itself, from setting priorities to the dissemination of results. In its dispatch on the promotion of “*education, research and technology for the years 2000–2003*” the Swiss government proposed the establishment of so-called “*National Centers of Competence in Research*” (NCCR). After a selection process, the NCCR “*North-South – Research Partnerships for Mitigating Syndromes of Global Change*” started its first phase in 2001 supported by SDC as well as by the SWISS NATIONAL SCIENCE FOUNDATION (SNSF). Very recently, the 11 principles of the KFPE were revised and a new funding mechanism established by the SWISS AGENCY FOR DEVELOPMENT COOPERATION (SDC) and the SNSF to tackle “*global themes*” through participatory approaches.

10 Bassirou Bonfoh et al., *Research in a War Zone*, in: *Nature*, Vol. 474, 2011, pp. 569–571, here: p. 570.

social, economic and cultural histories but moreover an acknowledgement that Switzerland was one of the “*centers of calculation*” within the French and British empires. The approach chosen here was to compare the scientific practices in Adiopodoumé and Ifakara, including the various transfers of people, technology and concepts between these sites and across continents. However, “*multi-sited history*,” as one could call this endeavor in analogy to what George Marcus has formulated for the field of anthropology, does not mean paying attention to the various geographical characteristics that shaped the course of the science only. Rather it includes switching back and forth between local, national, and international arenas, where science was produced, experienced, accepted, rejected and interpreted. While such an approach is more common for British and French historians, Swiss historiography has not yet come to terms with the empire. Looking at Swiss history from various geographical angles helps to destabilize the foundational categories on which Switzerland’s self-conceptions are built. Notions of science and technology cease to be regarded as homogenous entities shifted from the center to the peripheries. Rather these very terms disclose their local rootedness, their different and changing meanings over time and their quiet protest against any attempts of standardization. Moreover, seeing like an empire turns one’s attention to the travelling of concepts between various sites, as became pertinent in those parts of the study dealing with Swiss development aid. Stressing “*connectivity*” and mutual “*entanglements*” should not be read as an invitation to obstruct one’s view on processes of exclusion, suppression and disconnects that too characterizes the history of Swiss-African encounters. It is however assumed that taking on a relational approach to Swiss history will nevertheless account for more modesty and for a more nuanced understanding about the extents to which the notions of the “*self*” and the “*other*” are mutually constitutive.

The scope of this study did not allow many topics to be fully exploited. For instance, the role and the activities of former development agents in shaping Swiss health policy is a fruitful avenue for future research. Especially Switzerland’s involvement in the health sector reforms in Tanzania during the 1990s might lead to the working hypothesis that Africa functioned as a “*laboratory of privatization*” of European health systems. A second and perhaps more pressing issue that has been neglected here is the history of HIV/AIDS that has become one of Africa’s major scourges since the 1980s. It was in 2004 when a collaboration between Swiss and Tanzanian institutions led to the creation of the CHRONIC DISEASE CLINIC (CDCI) under the roof of ST. FRANCIS HOSPITAL in Ifakara, which aims to treat HIV/AIDS patients in the rural periphery. The CDCI today hosts the CD4 cell count that served as the entry-point to the major themes of this study. Most probably, the CD4 count serves not just as a diagnostic device but as a powerful icon that connects disease experiences, viruses, research sites and people.

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