COME HELL, OR HIGH WATER: TROPICAL DOCTORS, SLEEPING SICKNESS, AND GERMAN COLONIALISM IN TOGO, CAMEROON, AND EAST AFRICA 1901-1914

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ABSTRACT

DANIEL GLENN UNDERWOOD. Come Hell, or High Water: Tropical Doctors, Sleeping Sickness, and German Colonialism in Togo, Cameroon, and East Africa 1901-1914. (Under the direction of DR. HEATHER PERRY)

This project analyzes how German tropical doctors [*Tropenärzte*} influenced German colonialism from 1901 to 1914, with their peak influence occurring during the period of crisis and transition during the Reichstag colonial budget crisis of 1905-1906 and the following 1907 Dernburg reforms. This period of crisis and transition, coupled with the Dernburg concept of "scientific colonialism," a repackaging of Max Weber's scientific management, modified and "modernized" the concepts and functions of German colonialism in the German colonies of Togo, Cameroon, and East Africa. The tropical doctors and their sleeping sickness campaigns catalyzed this change through their engagements with sleeping sickness to make the German colonies and German colonialism practical as an economic and public health project.

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DEDICATION

I dedicate this project to my family, friends, and loved ones who supported and challenged me to complete it. I am especially grateful to my parents, Dan and Pam Underwood, who never let me give up. My loving partner also gave me the confidence and fire to overcome.

TABLE OF CONTENTS

Chapter 1: Introduction

This project analyzes how German tropical doctors [*Tropenärzte*} influenced German colonialism from 1901 to 1914, with their peak influence occurring during the period of crisis and transition during the Reichstag colonial budget crisis of 1905-1906 and the following 1907 Dernburg reforms. This period of crisis and transition, coupled with the Dernburg concept of "scientific colonialism," a repackaging of Max Weber's scientific management, modified and "modernized" the concepts and functions of German colonialism in the German colonies of Togo, Cameroon, and East Africa. The tropical doctors and their sleeping sickness campaigns catalyzed this change through their engagements with sleeping sickness to make the German colonies and German colonialism practical as an economic and public health project.

On April 24, 1884, Otto von Bismarck established the German colonial empire by declaring a protectorate over a region of Southwest Africa, an area known today as Namibia. The German flag flew but did not fly until August 7, 1884. From this beginning, the German colonial empire grew to include four African colonies, a naval base in China, and some Pacific islands. At its height, it was the third-largest overseas empire but ended after Paul von Lettow-Vorbeck surrendered to Allied forces on November 14, 1918, three days after the armistice signing that ended the First World War.

Before 1907, Germany had no unified colonial structure to administer and coordinate the various colonial possessions. Of all these colonies of the German Colonial Empire [*Kolonialreich*], the four African colonies were crucial for their colonialism project, with the most populous and productive being the most important. Despite being smaller than other empires, the 34-year colonial history was significant for Germany's emergence as a global power and promised economic security and commercial expansion.

During these expansions, there was a regional outbreak of African Trypanosomiasis, also known as African Sleeping Sickness, in the German African colonies of East Africa, Togo, and Cameroon [*Kamerun*]. The outbreak was responded to by the European empires sending several medical research missions known as "sleeping sickness campaigns." The sleeping sickness campaigns were significant events in the history of the German colonial empire and Africa that are often overlooked. These campaigns marked a transitional period in German colonialism when the country underwent modernization and bureaucratic reform. Medical experts and quasi-administrators played a vital role in this transformative period by dictating and proposing colonial policies based on public health parameters. was the disease that catalyzed this transitional phase of German colonialism. This project explores how these campaigns influenced German colonialism and affected the German colonies of East Africa, Togo, and Cameroon in their efforts to solve the public health crisis of sleeping sickness, placing it within the cross-section of two historiographies of German colonialism and tropical medicine.

Historiography of German Colonialism

The historiography of German colonialism is a complex field that has been extensively studied. The German Empire established colonies in Africa and the Pacific in the late 19th century, and the post-WWI era marked the first era of historiography. Interpretations of German colonialism have varied and were influenced by changing historical analysis trends and scholars' political orientations. Henrich Schnee's colonial revisionism during the Weimar Republic influenced subsequent historical analysis.[1]

Mary E. Townsend was a historian who wrote about the history of the German Colonial empire. She focused on administrative history and relied on the perspectives of former German colonial officials. However, she overlooked the perspectives of indigenous and other colonial

societies.[2] However, it is essential to note that some German scholars adopted a similar approach, though sometimes with greater awareness of colonial politics' complexities.[3] Following the end of WWII, there was a decline in interest in the history of German colonies. However, a renewed focus on Third World studies led to a revival in the interest in the colonies' relationship with diplomatic issues. East German historians emphasized the similarities between post-1945 Western "imperialism" and earlier capitalist-imperialist behavior. Marxist historians studied the correlation between colonialism and the pre-1914 industrial economy. East Germany produced practical research, while West Germany lacked a coherent synthesis. However, this changed with the *Sonderweg* thesis, Hans Ulrich Wehler's new historical methodology of "social imperialism," and the broader Bielefeld School of analysis.

Sonderweg Thesis

During the 1960s, there was a significant change in how historians understood the German colonial empire and colonialism. This shift was part of a larger trend towards social histories, which focused on the socio-economic structures of Imperial Germany. The precursor of this analytical shift was the scholarship of Eckart Kehr,[4] but the immediate source was the work of Fritz Fischer.[5] Fischer's interpretation of the origins of World War I and the aims of German wartime policy stimulated a widespread debate on German imperialism that involved a reexamination of colonialism and the colonial empire. The historiographical interpretation is known as *Sonderweg* and became the new interpretive lens for analyzing German colonialism and the German colonial empire.[6] The *Sonderweg* thesis postulated that German history followed a "special path" from aristocracy to democracy that was unique and separate from the histories of the other European powers. Wehler would build upon the ideas of the Sonderweg thesis and incorporate them into his histories and analysis of the German empire and German colonialism

with his idea of "social imperialism."

Social Imperialism

Wehler's thesis in *Bismarck und Imperialismus* portrayed how Germany became a colonial power as an example of "social imperialism" in the face of problems created by socioeconomic modernization. Wehler argued that Bismarck attempted to solidify support for a political system dominated by the Junker nobility and the Prussian monarchy; the German chancellor seized overseas colonies as part of a more general program to protect and expand markets of German industry. It supposed the program would reconcile the bourgeoisie and commercial interest groups, particularly the anti-liberal German empire. They also saw it diverting the working classes' revolutionary tendencies. By providing reserve markets in case of need, colonies would lessen the downturns' impact on the business cycle and support the high employment rate. According to Wehler's analysis, this thinking underlay Bismarck's decision to sponsor a limited colonial acquisition program in 1884-1885, beginning the German colonial empire.[7]

Wehler's work, like Fischer's, served as a model for younger scholars dissatisfied with the traditional emphasis on diplomacy and intellectual history. They rejected the tendency of established historians to treat Hitler as an aberration in the German past and created the historiographical meta-narrative known as Sonderweg, also referred to as German exceptionalism. Although the history of the colonial empire was not per se the primary interest of the Bielefeld School, the alternative approaches produced notable additions to German colonial historiography.

Bielefeld School

Wehler's thesis and the Bielefeld school analysis dominated German colonialism

historiography during this period, and they shifted how the *Sonderweg* meta-narrative applied to German colonialism's historiography.[8] Realigning German colonialism's optics to analyze the structural issues of the *Kaiserreich* and the "uniqueness" of Germany's modernization, it placed studies of German colonialism and the German colonial empire in the *Kaiserreich* rather than as its unique entity. Ultimately, the arguments over the *Sonderweg* continue into the current discourse around the *Kaiserreich* in various German history studies.[9] A historian of note in the American historiography of the German colonial empire and German colonialism is Woodruff D. Smith.[10] However, Smith focused on a summative history of the German colonial empire and, using similar lines of argumentation to Wehler, concentrated on the interactions between the German colonial empire and domestic politics and, by proxy, the connection between German colonialism and the socio-economic problems of the *Kaiserreich*. Smith argued that the German colonial empire and colonialism were vehicles of political controversy and building support for German politics.

A notable inclusion in Smith's contribution to the historiography was the link between Nazi imperialism and the experiences of the German colonial empire.[11] Using similar arguments put forward by the Belfield School, and Wehler, Smith constructed his argument around an intellectual and ideological history that the origins of Nazi imperialism were ultimate expressions of a long-standing academic and ideological evolution from the 19th to the 20th century. Smith argued that the development of *Weltpolitik* and *Lebensraum* were long-developing concepts in Germany and were integral and causative to the establishment of the *Kaiserreich* and the birth of German imperialist ambitions embedded certain paradigms into German colonialism that carried over to the imperial projects of Nazi Germany. Another notable inclusion during this time period is the work of Francesca Schinzinger.[12] She argued conclusively and persuasively that the

economic production of the colonies did not drive the German colonial empires' existence, as these colonies never materialized into a profit-producing enterprise.

The fourth shift focused from the 1990s onwards. Studying German colonialism became an area of interest because of globalization and a desire to understand past transnational connections. These trends were interested in colonial discourse, colonial forms of knowledge, and the repercussions of colonialism. While the "Bielefeld School" and social history dominated the literature from the 1970s, the post-colonialism method changed the historiography of the German colonial empire and German colonialism into cultural history.[13]

Historiography of Tropical Medicine

The other realm of scholarship this project intersects with is European tropical medicine, specifically German tropical medicine.[14] The initial works on German tropical medicine came from tropical doctors, such as Ludwig Külz, Robert Koch, and Friedrich Kleine. Like the initial historiography of German colonialism, these doctors wrote memoirs of their African experiences with a distinct tone of playing down the horrors of German colonialism and instead focusing on their achievements and endeavors framed in paternalistic humanitarianism.

Recent historiographical trends have continued to explore the intersection of tropical medicine and colonialism, focusing on the complex interplay between medical practices, power dynamics, and global health. Additionally, scholars have begun to examine the broader impact of tropical medicine on the development of public health systems and global health governance. For this project, the two most important in German historiography are the works of Wolfgang Uwe Eckart and Manuela Bauche, who established the modern intersectional framework for examining and analyzing the cross-section of colonialism and tropical medicine in a German

context.

The connection between colonialism, imperialism, and tropical doctors in German tropical medicine traces its origins to Wolfgang Eckart's excellent bibliography of works for which the framework and resources it provides for the study of medicine and German colonialism.[15] Eckart's central thesis and corresponding arguments linked the medical fields, German Colonial circles, and, ultimately, the tropical doctors to the projects of German Colonial imperialism. However, this project diverges from Eckart because it does not make the argument for or against the relationship between the imperial and medical projects of those in the German African colonies and that of Nazi Germany. Specific terminology is still used as a direct translation from the primary source material, such as "concentration camp" from the German word *Konzentrationslager.* Still*,* the use of the term is not meant nor framed as a reference to the camp system involved in the Holocaust, nor with the concentration camps used in the genocide of the Nama and Herero in *Deutsche Südewest Africa* [German Southwest Africa][16] people but engages with the camp system as it was during the early 20th century in the three German African colonies this study examines.

The topic of this project originates from Manuela Bauche and her recent scholarly work. Bauche's in-depth study analyzed malaria control in the African colonies of the German Empire and linked them to far less well-respected simultaneous malaria eradication programs in northern Germany. Bauche argued that it made the ongoing processes of domination by disease control measures. She argued that malaria control was not for medicinal reasons but for caring for sick and injured people. Therefore, the German health system expanded state power to control the disease. Bauche, like Eckart, used extensive material from medical publications and archives in Germany and the two present-day states of Cameroon and Tanzania to draw far-reaching

similarities between East and West Africa with East Frisia the purpose of using this source that establish a cross-colonial and metropolitan picture central to Bauche's analysis. Bauche's significance in her monograph to the historiography of German colonialism is in how she took the power relationships between medicine, doctors, disease control, and colonialism laid out in Eckart's work and applied them in a specific argument where disease control drove German colonialism.[17] However, this project diverges from Bauche's framing because it examines the three German colonies in a comparative framework to answer how tropical doctors interacted with the colonial system in their attempts to control the spread of sleeping sickness instead of malaria.

Within the English writing historiography, the works of John Ford, Maryinez Lyons, Deborah Neill, and, more recently, Mari Webel have provided much-needed coverage of this topic to a broader nonspeaking German audience.[18] Ford gives the best overview of the sleeping sickness epidemic from an ecological viewpoint. Lyons' took that environmental and epidemiological approach and expanded on the sleeping sickness epidemic in more detail, focusing on social history and giving the strong argument of sleeping sickness as a "colonial disease." Lastly, Webel expanded on her 2012 dissertation and looked at the complicated nature of colonial authorities in implementing disease control measures in East Africa in modern-day Tanzania.

The last work this project directly engages with is that of Deborah Neill. Like Bauche and Eckart, Neill examined the German colonial system and the use of tropical doctors in an international framework.[19] Besides these German works, there remains a space for analyzing the relationship between sleeping sickness, medicine, doctors, and colonialism in a specific German colonial setting. This project addresses this hole and builds on the earlier works of Eckart and

Neill. Eckart's career approaches the subject by examining how tropical doctors were not only agents of empire and crucial to the colonial project but also how they drove and continued the colonial project through their encounters with the disease. I am not looking beyond the colonial period. I am approaching the subject of Neill's work by framing it in a German context and not in an international one. I am not only asking how tropical doctors' crucial agents of the German colonial project in Africa were but also assessing how their roles contributed to building and continuing the colonial project in Africa. This story begins with the appointment of Bernhard Dernburg and the beginning of the modernization of the German African colonies.

Dernburg Reforms (1907-1910)

In 1906, Bernhard Dernburg became the *Kolonialdirektor* and held positions on the directorial boards of thirty-nine companies, including the AEG. He had made a name for himself as a financial expert skilled in putting tottering firms on their feet. He exemplified Germany's modern group of managers who do not possess ownership of the enterprises they lead. This group comprises highly educated individuals from middle-class backgrounds who are not necessarily technical experts, with many holding degrees in law or economics rather than scientific fields. During his tenure as head of the colonial department, Dernburg implemented substantial administrative reforms. He established four divisions within the Imperial colonial office, each dedicated to specific administrative duties. Under the leadership of Dernburg, colonies were granted greater autonomy in finance and governance. Individual governors were responsible for managing their budgets, and colonies were expected to achieve financial independence by securing private loans with Reich guarantees. In contrast to France, which required colonies to fund their military forces, the Reichstag covered the cost of colonial defense.

In 1907, Dernburg spearheaded colonial reform in Germany by promoting the idea of self-

sustaining colonies that could aid in the country's industrial growth. He proposed that the government provide the initial investment capital for development, particularly railroads and other social infrastructure. Rather than relying on large private corporations, Dernburg believed private investment would naturally follow if the government made significant overhead expenditures and implemented a steady policy of rapid economic development. Sometimes (such as in white agriculture in Southwest Africa), the government could provide loans, but Dernburg expected private colonial enterprises to self-finance any colonial efforts in the German African colonies.[20]

Beyond these broad reformist approaches, Dernburg did not have any specific plans about what to do to improve the German colonies and yet had to appear to be doing something. His mandate and inclinations were to conduct reform, but due to his background as a business manager, he wanted to base policy on helpful information. From this want of good policy came the core of Dernburg reforms.[21] Dernburg added his energy and vision of German imperialism, which featured re-organizing the world economy into industrial centers and primary goods-producing peripheries; the most important of these world systems would be the British, German, and American empires.[22] The Dernburg idea of reform originates from an economic consideration, as is plain in his pamphlet:

> Colonization, and, it makes no difference if we are talking about plantation or settler colonies, means making the land useful-utilizing its riches, flora or fauna, and particularly the people in the service of the economy of the colonizing nation, which in turn, is obliged to reciprocate with its higher culture, its moral attitudes, and its better methods. Now the native is the most important object of colonization, certainly in all our plantation colonies. There, slavery, thank God, has been terminated and the appropriate workers may be obtained only through contracts from other colonies or out of our own. The manual labor of the native is the most important active factor; herein lies the eminently important problem (of colonization).[23]

Economic revitalization and expansion were at the heart of Dernburg's attempted reforms, centered on developing colonial infrastructure with specific railroads. The mechanism that

Dernburg tried to use was not new or revolutionary. Dernburg also insisted that the government plan colonial development to take maximum advantage of existing technologies and marketing opportunities. This he called "scientific colonialism."[24] In part, scientific colonialism was another gesture of public relations; scientific and technical expertise had always been significant in the German colonial administration. However, Dernburg's version was innovative in that he intended to back planned development with extensive financing and systematic, businesslike management. Dernburg's new direction can be seen in the *Kolonialblatt*, the semimonthly official colonial journal. Under Dernburg, scientific articles increased, showing heightened technical interest and an increase in reportable scientific activities.[25] Dernburg proposed a neo-Listean approach that could be implemented in any primary producing region. He strongly supported the idea of German expansion into unexplored areas of the Congo Basin, which underscores the link between German colonialism and imperialist concepts.[26]

Dernburg's reliance on the governmental direction of economic development implied a requirement for a competent and trained colonial service. Thus, despite earlier efforts to create such a service, Dernburg emphasized his role in changing the personnel structure of the Colonial Office.[27] In order to improve the colonial officials' education, it was necessary to move away from traditional legalistic civil-service training and focus more on practical training in colonial economics. Additionally, the job security and career opportunities for colonial officials needed to be enhanced. To achieve this, Dernburg maintained previous programs that ensured officials received detailed training in the languages, legal customs, and economic backgrounds of the colonies to which they were assigned. Dernburg also worked tirelessly to establish a career path for colonial officials. After facing many political struggles, Dernburg successfully passed an act in April 1910 that regulated the status and promotion schedule of colonial officials, granting

them the same status as other German civil servants.[28] It was a major personal triumph for Dernburg, and it was also his last while in office.[29]

During the well-publicized inspection tours of Africa, Dernburg became attracted to building colonial economies around small-scale indigenous populations. He, therefore, fell out of favor with the white settlers in German Southwest and German East Africa. Although his development program did not ignore settler or plantation interests, and his hand-picked deputy was Friedrich Lindequist, a settlement supporter, the indigenous economy policy prevailed.[30]

In East Africa, Dernburg's approach meant constructing the central railway, an expansive project he pushed through the Reichstag after his return from his first tour. In other colonies, this approach meant supporting agriculture, geological, and economic research- or what Dernburg called "scientific colonialism"-expanding the market economy through public investment in transportation and education and using taxation and coercion to force modernization on colonial subjects who resisted it. In East Africa and Togo, they adopted coherent programs to develop indigenous markets. In Cameroon, despite attempts to do the same thing, new developments continued to emphasize the needs of rubber-producing companies that wanted cheap labor more than a modernized local economy.[31]

In 1910, Dernburg stepped down from his position as Colonial Secretary, likely due to mounting opposition and frustration with the slow progress of his reforms. However, his legacy during his brief tenure was remarkable compared to Germany's previous colonial experiences. He streamlined and expanded the central administration of the German colonial empire, appointed competent officials in the colonies, and facilitated significant development projects. Despite these achievements, the colonies' contribution to Germany's economic prosperity remained negligible. Nevertheless, Dernburg's most outstanding achievement was in public

relations. Under his leadership, public interest in the German colonial empire was reignited, with the Colonial Office and various colonialist organizations elevating the colonies' significance in Germany's self-image and domestic politics.[32]

Dernburg's reforms focused on promoting humanitarian and economic development in Africa through quality medical training and research opportunities. He believed Africans had business foresight and considered Europeans crucial to the colonies' success. The tropical doctors and the German colonial medical system were essential to the success of economic ventures, including new agricultural industries.

Identifying the *Tropenärzte*

Tropical medicine attracted a diverse group of professionals seeking new opportunities and adventure in the German colonial empire. Tropical doctors embraced colonialism and even helped establish colonies. They also wielded significant influence in European tropical medicine and other scientific fields.

The tropical doctors were a particular group of scientists and physicians who studied the "modern" field of tropical medicine in the 19th century.[33] Tropical medicine, a subfield of colonial medicine that arose in the 1880s and early 1890s, became a specific scientific field partly because even though physicians dominated it, the area welcomed scientists specializing in zoology, helminthology, and entomology.[34] Most scientists who chose this path were part of a vanguard of adventures and believers committed to spreading the benefits of Western medicine despite not being organized philanthropists. Scientists saw the Western medical practices of bacteriology and microbiology as beneficial to the world. From their belief in the inherent benefits of science and medicine, these scientists and physicians shared a humanitarian view they could "save" people from disease (but also from "backwardness"). The reason saving linked

towards “backwardness” is that medicine in the 19th century was taken as a prime exemplar of the constructive and beneficial effects of empire and colonialism, and thus, to the imperial mind, as one of its most certain claims to legitimacy.[35] However, tropical doctors did not hold this view of being a part of the colonial project. Instead, they saw themselves as separate and independent from the horrors and realities of empire and colonialism. Despite their limited perspectives, tropical doctors and other scientists believed in European technology, science, and cultural superiority. They saw this superiority through the lens of racial distinctiveness, thus tied it to the structure of empire and colonialism.[36] Carl Schilling’s speech reflects these scientific paradigms:

> These natural peoples [*Naturevölker]* are completely and helplessly exposed to the dangers of climate and illness. Is it not revealing that the Indians, decimated by plague and cholera every year, have not found the means to heal or prevent epidemics and have not even uncovered how these diseases are transmitted from person to person? Only European science has clarified this issue and thus has provided the possibility of fighting these epidemics. It is like this with all tropical diseases: the Europeans transplanted the protection afforded by smallpox vaccinations, for example, to the tropics.[37]

Schilling explores the connection between colonialism, science, and medicine in Europe. The notion of medicine’s implicit benevolence influenced European scientists and tropical doctors, shaping their perspective. Medicine was considered a divider and a solution between the colonizer and colonized, whiteness and color, modernity and austerity. These divisions were based on the social order of their educational setting.

In the *Kaiserreich* era, most tropical doctors were men from the upper and middle classes. They received their education from esteemed universities like Frankfurt, Hamburg, and Berlin. After 1899, Hamburg established the Institute for Ships and Tropical Diseases [*Institut für Schiffs und Tropenkrankheiten*][38], which provided a center for research and advanced medical training.[39] Educational institutions failed to provide specialized education for tropical doctors in specific colonial locations, focusing on perceived universal skill sets. This approach posed a

problem as trainees were not introduced to the history and culture of the people they would interact with daily. While attending lectures at the nearby Colonial Institute in Hamburg, students could study topics such as Islam with Carl Becker or geography with Siegfried Passarge. However, laboratory and coursework took up most of the time, leaving little room for language and culture courses. The priority for tropical medicine schools was to produce a group of professionals with expert knowledge and universal skills in bacteriology and parasitology, which could be applied in most contexts, rather than providing students with cultural and location-specific knowledge. So, students relied on hearsay, gossip, and preconceived notions of colonial life and people.[40] However, the universal skill sets that tropical doctors gained allowed them to take a significant role within the colonial structure, as the German colonial empire relied on these physicians to do many roles within the colonies.

Tropical doctors were also tied to the German colonial military and the navy because their skills were essential to the German army. Because of this close relationship, many heads of tropical medicine began their army and navy careers. For example, Bernhard Nocht, the long-serving head of the Hamburg school, started his career as a port doctor [*hafenarzt*] and kept close ties to the maritime service. The military and colonial experiences of men such as Nocht gave them creditability as researchers and field workers and kept them in a close, reciprocal relationship with governmental officials.[41] However, the demographics of the tropical doctors shifted as the 19th century moved into the 20th century. Doctors often originated from the upper classes of colonial society and its local groups.[42] The most famous German tropical doctors, Robert Koch, Ludwig Külz, Oskar Feldman, and Friedrich Kleine, came out of this new echelon of doctors were of higher socioeconomic status and with a more intimate relationship with the German Colonial Societies. Kleine and Külz were influential in their own right in tropical

medicine. Namely, Kleine was an assistant to Robert Koch and helped to develop a treatment for sleeping sickness and Külz combating sleeping sickness, among other diseases in Cameroon.

Tropical doctors composed a critical group of pioneers of physicians turned administrators. During the nineteenth century, medicine abandoned its metaphysical cast, preferring empirical observation to a priori reasoning. At the same time, the natural sciences were much less specialized than they were to become at a later age, and the study of medicine provided broad training in subjects like physics, chemistry, and medicine. They taught medical men the art of exact observation and diagnosis in a discipline that enhanced the value of their non-medical comments. They assumed physicians would help themselves in an emergency, which was helpful in a colonial situation because they could prescribe treatment for their fellow colonists and the indigenous peoples. The medical profession held a lot of social prestige in Germany. Physicians were typically part of the middle class and had the ability to act as explorers and gain the public's attention. Some physicians gained extensive knowledge of Africa through their travels and research, which made them suitable for early administrative appointments.[43]

Another critical aspect of tropical doctors was their enormous contributions to various scientific fields. The German contribution to tropical medicine was considerable, given the short duration of German rule (1884-1918). They were developing a method for researching and treating sleeping sickness, producing beneficial and harmful results in African patients in East Africa. The German quest for exact medical knowledge was prodigious and formed the basis for treating colonial subjects. For the patients, however, German rule spread very thin in the Pacific, and the Reichstag voted for funds for philanthropic colonial endeavors.[44] Thus, the research and practices of tropical doctors became a fundamental aspect of the growth of German and

European tropical medicine. The medical advances achieved by the tropical doctors came at a terrible cost to human life in the colonies, as many African patients died from their treatments. Or they developed blindness or other adverse effects. The consent of the patients is a tricky subject because there is no written consent from the patients, reducing them to test dummies for human medical experimentation by tropical doctors.

This view of patients is another reason the tropical doctors are unique, as they adopted German colonialism and the German colonies as a "Living Laboratory." For instance, as it pertained to medical research, there were no restrictions on medical experiments. In Germany, medical experiments on humans were banned in 1900; thus, the colony allowed human medical experimentation. They drove their excitement for colonialism in part by the scientific advances made in the early twentieth century; path-breaking discoveries reinforced across national borders a common sense that tropical medicine could save the world. Medicine, therefore, became tied with colonialism since colonial expansion supplied new terrains to explore and new populations to study in the service of finding and curing the significant diseases that threatened both Europeans and indigenous people. However, definitive cures for the most critical diseases remained elusive. Doctors, therefore, continued to rely on prophylactic measures and tropical hygiene training to slow the spread of tropical diseases. However, in tropical hygiene, notions of racial differences and innate inferiority were pervasive, and race affected how acclimatization and other health-related matters were presented.[45] Thus, while the tropical doctors attempted to find cures to an epidemic within the colonies, they could not escape the ideological framework of racial hygiene that became their basis whenever attempts to solve problems through tropical medicine failed.

Sleeping Sickness

The World Health Organization (WHO) has selected African Trypanosomiasis as one of the "most neglected diseases" in recent years.[46] There are two types of trypanosomiases. The first type is protozoan *Trypanosome brucei gambiense*, which causes a chronic disease that can persist for months or even years before it enters the central nervous system. The second form of trypanosomiasis is caused by *T. b. Rhodesiense* is acute and can cause death within three to twelve months of infection. Trypanosomiasis is a vector-borne disease that is spread by the bite of an infected tsetse (*Glossina palpalis*). Once a person is infected, it progresses in two stages: an initial hemolymphatic stage where the trypanosomes enter the bloodstream and the lymphatic system, usually leading to a swollen gland at the bite mark, and a neurological (meningoencephalitis) stage after the trypanosomes cross the blood-brain barrier and begin to invade the central nervous system.

Early stage sleeping sickness is often preceded by a trypanosomal chancre, which usually appears 2 days to 2 weeks after being bitten by an infected tsetse fly. Symptoms develop 1-3 weeks later, including headache, malaise, weakness, fatigue, itching, and joint pain. First-stage signs include enlarged liver and spleen, weight loss, and intermittent fevers lasting up to a week. Lymphadenopathy, mainly in the posterior cervical region, is also a possible symptom.

*T. b. gambiens*e usually progresses to the second stage after 300-500 days, whereas *T. b. rhodesiense* infection can progress to the second stage within 21-60 days. In the second stage, the parasites invade the central nervous system, causing neuropsychiatric symptoms such as daytime sleeping, nighttime insomnia, mental and motor issues, and sensory and neurological symptoms, hence the name "sleeping sickness." *T. b. rhodesiense* is more likely to cause endocrine abnormalities and severe cardiac involvement than *T. b. gambiense*.[47]

At the beginning of the 20th century, there was significant interest from European states and scientists in sleeping sickness due to its medical, administrative, economic, and civilizational challenges. Doctors from all over Europe came to Africa to study sleeping sickness in the various European colonies, offering the opportunity for professional qualifications and the claim to have extensive power over the affected population, land, infrastructure, and the organization of the state. Besides research, tropical doctors introduced forced examinations and treatments of the African population and the authorities-controlled traffic routes. Europeans knew of plague, smallpox, and cholera, but sleeping sickness was new and extreme in several ways. The acute infections and death toll shook the German colonial economy, but the lifestyle and economy of those affected by sleeping sickness followed the infection routes. Before the European colonization efforts of Africa in the 19th century, sleeping sickness was endemic in various parts of Africa, with occasional epidemics, long before the colonial era. It is still a significant health threat to African society today.

Before the colonial era, Africans had established a rough equilibrium between the human and domestic ecosystems and the natural and wild. The European colonization of the African continent was not new, as the Portuguese and Spanish kingdoms established trading posts following their colonization efforts. However, the European colonial stage expanded during the mid to late 19th century with the emergence of newer European powers of Germany and Italy. The period of colonization and imperialism, more commonly known as the “scramble for Africa,” was a multifaceted process with colluding European powers that attempted to show a unified colonization process by establishing various spheres of influence and a free trade zone in the Congo the present-day country of the Democratic-Republic of the Congo. While it was memorialized in popular memory as a meeting in a map room with the various European heads

of state, the reality is that every European empire relied on the cooperation of local leaders and peoples in establishing these newer African colonies.

The rapid creation of these new colonies and political zones shattered the ecological equilibrium all over Africa and, more importantly, the regions endemic to sleeping sickness in central Africa. A series of environmental crises followed, including famines and epidemics of rinderpest, sleeping sickness, jiggers, and other diseases that began to spread beyond the regions where they were traditionally endemic.[48] The epidemic had a sudden and vast impact on the local communities' economic livelihood and social fabric. Attempts to treat and prevent the disease brought new colonial involvement in every aspect of life.

In 1901, a severe outbreak of sleeping sickness began centered in British Uganda, more specifically along the shores of Lake Victoria and the various islands scattered throughout the lake. The outbreak triggered a public health crisis unique in the European colonial sphere causing catastrophe for humans and their livestock across West and Central Africa. As news of the outbreak spread throughout the European colonial networks, European recognition of the epidemic began a race to discover its causative pathogen and transmission mode. By 1905, around 200,000 inhabitants in the Lake Victoria region, approximately one-third of the population, had died.

Etiology of Sleeping Sickness

At the end of the 19th century, European colonial physicians diligently investigated the etiology of sleeping sickness. In 1895, Dr. David Bruce, an English physician in Uganda, detected a new variety of parasites (trypanosomes) from the blood of dead animals that had shown symptoms similar to human sleeping sickness. Dr. Bruce reasoned that some insects were essential as a “parasite carrier” in transmitting trypanosomiasis, just like malaria. After many

investigations, he finally found the pathogen in the intestines of tsetse flies. It was not until 1902 that Dr. Alto Castellani, a physician stationed in Uganda, could microscopically confirm trypanosomes in the bodies of sleeping patients. Dr. Bruce again identified the tsetse flies as the "intermediate host" of the pathogen. Bacteriology quickly identified the infection process of sleeping sickness, and medical history refuted the "miasma theory" hypothesis that the disease was caused by air or river and lake water pollution.

Once these processes of sleeping sickness transmission had been identified, the colonial powers had three alternative ways of taking countermeasures. The first option was to try to destroy the "parasite carriers." As tsetse flies tend to nest in tropical bushes along bodies of water, the colonizers attempted to eliminate the herd of flies by clearing or restoring the banks of rivers and lakes, thereby eradicating them. The second option considered was resetting the natives who lived in the epidemic areas to the areas spared from the disease. In this way, the Europeans wanted to prevent contact between humans and flies.

These measures mainly aimed to separate healthy people from the trypanosome hosts physically. There was, therefore, no question of treating the local infected population. In this sense, the third option completely differed from the first two. The last measure involved destroying the pathogens in the human body with the help of drugs. Arsenic-type drugs were used for this purpose, as they were able to eliminate trypanosomes from the blood of patients. However, the effect of these drugs was not permanent, and those treated very often suffered from the recurrence of the parasites. In addition, arsenic drugs usually cause severe side effects for those treated. For example, the arsenic-containing "Atoxyl," which was used in Europe to treat syphilis, caused blindness in African sleeping sick people.[49] However, European doctors continued to administer this drug to the patients because this was necessary for collecting data on

the effects of the drug. The drug treatment took on the character of a “human experiment.” In addition to the measures mentioned above, attempts were made to prevent the further spread of the disease by suppressing domestic traffic to and from the epidemic areas.

Chapter 2: Sleeping Sickness in East Africa

The first reported outbreak of sleeping sickness in German East Africa was in 1902 when four sleeping sick people were found in the Muansa district, an area on Lake Victoria's eastern shore bordering the English Uganda Protectorate.[50] The English physician, Dr. Christy, warned the senior German physician, Dr. Oskar Feldmann, that sleeping sickness was advancing from Uganda on the east side of the lake toward Stiden.[51] In response, the German government established three posts on the Gori River, which formed the British-German border, to restrict the traffic of the native population.[52] On July 22, 1903, three sleeping sick patients were found by one of the three guards, who were taken to a straw hut near the post and isolated there. Lieutenant Baumstark instructed the local chief to strictly prohibit the locals from intervening with the English territory, to evacuate the village's inhabitants where the three sleeping sick lived, and to burn the town.[53]

The Prussian Minister of Education, Dr. Studt, requested that a special commission be sent to East Africa to research sleeping sickness. The minister referred to the "Institute for Infectious Diseases" director and recommended his early scientific research.[54] The Commission on Sleeping Sickness was established in 1902 to investigate the spread of sleeping sickness in German East Africa. In September 1903, the tropical doctor Dr. Lott on the Gori River confirmed the tsetse fly, which meant that the German colonial government had to fear not only the introduction of sleeping sick people infected in Uganda to the German side but also an endemic spread of the disease in its territory.[55]

Dr. Feldmann found three sleeping sick people in the Bukoba district, which was on the left bank of Lake Victoria. The ward's doctor ordered the burning of the huts inhabited by the sick and put the three sick in the newly built isolation house of the ward's hospital. Dr. Feldmann

had microscopically detected trypanosomes in the blood of the dead in the Bukoba district of German East Africa. The local doctors diagnosed 21 locals as sleeping sick by the end of February 1904.[56] In November 1904, the colonial department in Berlin judged that the disease had not yet "set foot" in German East Africa and that there was no spread of the infection from the infected to healthy people.[57] Under these circumstances, the doctors' research there was deemed sufficient.

The colonial department refused to send a special commission to the expedition, arguing that it was primarily a competition between German science and that of other cultural states. They also suspected that the Royal Prussian Ministry of Finance and the Prussian Ministers of Education had sought financial help to use their limited funds to compete for scientific successes with other European countries only on the "national honor" of the German Empire.[58]

In January 1905, the Prussian Minister of Finance rejected the request of the Minister of Culture to send a special research commission to German East Africa but eventually reversed its decision due to changing circumstances in German East Africa. At the end of November 1904, Dr. Feldmann confirmed the tsetse flies and sleeping sickness cases among the inhabitants of the islands of Kome and Lumondo in the south of Lake Victoria.[59] Feldmann's recommendation for the situation was expressed with his expectation that new drugs, comparable to quinine in Koch's malaria control, would lead to healing success in many patients. The governor of German East Africa also demanded that the colonial department send a research expedition as soon as possible. Due to the dire circumstances stated by Dr. Feldmann, financial support was now in the offing; the Imperial Treasury agreed to include the special commission for the study of sleeping sickness costs in the draft budget for 1906.[60]

Koch's Expedition for Sleeping Sickness in Amani

The Sleeping Sickness Commission of 1905 decided to send Dr. Robert Koch to conduct a formal research campaign in German East Africa the following year. This was because Koch had volunteered and was already well known for his malaria campaigns, and sleeping sickness was spreading further.

On April 16, 1906, the expedition to study sleeping sickness departed from Naples to German East Africa and landed on May 3 in Tanga on the German East Africa coast.[61] Koch's research plan was to spend the first three months studying the tsetse fly, which transmitted the disease to the healthy ones, and to assess whether only the *Glossina palpalis* played an essential role in the disease's spread or whether the infection of the disease would also occur through the engraving of other types of tsetse flies.[62] Robert Koch had the tropical doctor Dr. Kudicke and the director of the local landscape biological experimental station, Dr. Stuhlmann, investigate the area for the presence of tsetse flies. Koch planned to observe the lifestyle and reproduction of the flies, trypanosome infection in goats and sheep, and attempt deforestation to repel the tsetse flies. In addition to exterminating the tsetse fly, he intended to use animal experiments to test whether any animal was a carrier of trypanosomes without becoming dormant due to its immune system. This experiment's success paved the way for him to breed trypanosomes artificially and further obtain a cure for the disease.[63]

The choice of location for the expedition reflected Koch's experience on his last visit to Uganda, where he received little information from the British Sleeping Disease Commission. In contrast, in Amani, Koch had a research station with a well-directed laboratory. He was in a better position to work on the problem of the disease's infection process "undisturbed."[64]

The tsetse flies in the experiments only survived a few days in captivity. Still, Sergeant Sacher and Dr. Kudicke had improved the breeding of the flies so that many were available.[65] To

test whether other tsetse flies could carry Trypanosomes, Koch fed the uninfected flies rat blood that contained the *Trypanosoma gambit*, resulting in the flies becoming infected after an incubation period of ten days. Koch also tried to kill the flies by removing their habitat, specifically bushes. The deforestation measures in the Luengetal Valley had only been taken on both sides of the main street; Koch observed that "since the bush was destroyed, the glossies have completely disappeared."[66] As far as Koch's reports can tell, the fly research in Amani seemed to progress smoothly, but when he discovered that sleeping sickness had spread to other regions, he left immediately.

Koch's Expedition on the Ssese Islands

Robert Koch visited the German station Muansa on Lake Victoria's shores in 1905 after learning that over 1,500 people had died there from sleeping sickness. Based on another report by the physician working there, Feldmann, that the autopsy of a corpse confirmed the presence of trypanosomes, Koch concluded that the German territory of Lake Victoria was contaminated with sleeping sickness and felt obliged to go there.[67] On June 13, 1906, he embarked on a journey into the area and arrived at Muansa on June 30.[68] Once there, he treated 2,093 local population but found no carrier of Trypanosomes by testing the glandular fluid. A similar result emerges from the investigations on the nearby islands of Kome and Ukwere.[69] Koch was then offered a laboratory in Entebbe to study the disease more thoroughly.[70] The expedition of Entebbe settled on the Ssese islands in the northwestern part of Lake Victoria, which comprised about 40 islands. Koch chose this because they could find sufficient medical material and the opportunity to study the tsetse flies.

The spread of the disease took on the Ssese Islands to such proportions that, according to the missionaries' estimate, 18,000 people fell victim to the disease. However, Koch's attempt to

separate the research and treatment center met with difficulties. Since Koch could not refuse the patients, he took over the lighter patients while they interned the seriously ill in the hospital of the "White Fathers." The expedition aimed to find a drug that could destroy the trypanosomes in the body of the sick "just as quinine destroys the malaria parasites," according to Koch.

Before leaving the expedition, he had equipped the trip with two drugs, namely atoxyl and trypan red, which he had considered effective in treating sleeping sickness. Robert Koch, head of the German expedition to the Ssese islands in the Congo, discovered that arsenic-like medicines could treat *Trypanosoma*. Multiple experiments show that with a single dose of 0.5 g atoxyl injected subcutaneously on the patient's backside for two consecutive days, the trypanosomes from the glands disappeared with no signs of intoxication. After eight hours of injection, the pathogen was no longer detected in the epithelial fluid. The number of people treated with this medication rose from 359 to 900 during a month, so large that Koch himself had to demand the delivery of the drug.

People with mild illnesses with a fifteen to twenty-day break should be given repeated views, while the seriously ill should be returned after ten days. Robert Koch worked on the Ssese Islands, where he developed a treatment for sleeping sickness by poisoning patients with 0.5 g atoxyl. Quite a few ill suffered the pain caused by this treatment and withdrew from further treatment. The English colonial government of Uganda showed great interest in the effects of the drug treatment and dispatched three medical professionals to the main island of Ssese. Robert Koch could microscopically confirm crocodile blood in the body of the tsetse fly.

He worked on treating trypanosomiasis "with great energy from sunrise to dusk" on the Ssese Islands. From these research results, Koch concluded that in combating flies, both cut down the shrubbery and exterminate the crocodiles, a measure that deprives flies of their food

source and destroys them. At the end of May 1907, he felt obliged to return to German East Africa because more and more people from German territory visited him for treatment.

Other Epidemic Areas in German East Africa

He found "far more sleeping sick" than expected in Kisiba, and he immediately established a sleeping sick camp in the large village of Kigarama with around 3,000 inhabitants.[71] The infected population survey revealed that almost all these patients had visited the neighboring Uganda colony. He discovered that many Kisiba locals immigrated to the British protectorate because they found little opportunity to find worthwhile work in their home country to raise funds for taxes, livelihoods, etc.[72] This was most likely due to Governor Eduard von Liebert introducing the "hut tax" in German East Africa in 1908.[73] The colonial government taxed the respective hut to the local population annually at three rupees. Despite the many sick people, Koch could not find the tsetse fly in the Sultanate of Kisiba, which belongs to the Bukoba district; thus, the source of the infected individuals eluded him.

He found that 80-100 people from Kisiba alone were busy collecting rubber juice on the peninsula of Lake Victoria when he visited the region in 1910. Koch saw the increase in jobs in the German area as the best solution to the problem and reduced the number of people infected with the sleeping sickness. "But now you seem to have found people, especially in German East Africa, who can be recruited in ignorance of the danger [of infection]."[74], which comprised eighteen men and fifteen Kisiba men, heard from them that 80-100 people from Kisiba alone were busy collecting rubber juice on the peninsula. When Robert Koch visited Bukoba and Muansa in 1907, he found that the number of sick people in the Shirati district did not exceed that in Kisiba. They confirmed the first cases of sleeping sickness on the Gori River in December 1902.

Despite the first intervention by the German government, he soon no longer noticed the sleeping sickness in Shirati. Koch found it necessary to block the traffic of those locals who moved freely between German East Africa and Uganda. Koch's expedition found that the local population was in heavy traffic with the neighboring, heavily contaminated colony despite the high risk of infection. Koch says the colonial administration's "despondent" behavior was because of the power structures.[75]

Koch's Return and the Planning Epidemic Control

Robert Koch returned to the Ssese Islands on July 3, 1907, and investigated alternative medications that could substitute for the toxic properties of atoxyl.[76] He also handled the specific control program against trypanosomiasis in the German colony. The German colonists there were willing to subject themselves to Koch's treatment. This means that the fight against epidemics in the German area was primarily focused on the local African population, employing coercive measures to prevent crossing the border and treating the infected in the hospital "properly."[77] Koch said that at least two months of regular toxin treatment was necessary to remove the trypanosomes from the patient's blood, but the local population would not have stamina for the treatment.[78] Koch also called for the fight against sleeping sickness, focusing on visiting the sick, interning them in new "concentration camps," and continuing uninterrupted treatment with atoxyl.[79]

In October 1907, Robert Koch returned to Germany after a one-and-a-half-year stay in German East Africa. On November 18, 1907, the Reich Health Office's Committee for Ship and Tropical Hygiene and Subcommittee for Cholera met in Berlin.

Koch presented his research results and proposed measures that should be taken selectively according to the different conditions of the contaminated individual regions. He assumed that

three locations in the East African colony, namely Kisiba, Schirati, and the east coast of Lake Tanganyika, should be considered sleeping sickness outbreak zones. Although Koch never visited Lake Tanganyika, he had the doctor's report stationed there, Dr. Neubert, who said that the coast of the lake from Usumbra to the south of Udjidji was threatened by the plague or had already been hit. According to Neubert, numerous men went as "rubber collectors" to the Congo state on the other side of the lake, where they most likely were affected by trypanosomiasis.[80] To combat the tsetse flies, Koch included the direct destruction of the flock of flocks by deforestation of the bank of shrubbery and the shooting of the tsetse fly's host animals. If this does not prevent the epidemic, they should consider resettlement of the people living in the area in healthy places.

Robert Koch's control plans, with his suggestions regarding the isolation of the sick in the camp and their treatment with toxicity, were approved by the participants in the meeting.[81] The fight against sleeping sickness in German East Africa was now primarily about how the Kochs project worked and should be put into practice.[82] They also stationed a doctor who accompanied Koch on the expedition in each plague area, which was sufficient for the fight against sleeping sickness in German East Africa.

Limits of Koch's Controlling Measures

The Koch expedition was set in 1906 to theoretically clarify the etiology of sleeping sickness, which should pave the way for the prevention, diagnosis, and treatment of pathological conditions. Initially, Koch considered the carrier of the pathogen, the tsetse fly, and wanted to deal with its life cycle and the developmental history of the trypanosomes living parasitically in the fly's body in Amani. After receiving news of the "probable" spread of the disease in German territory, he led his expedition somewhat haphazardly after the epidemic, and research in Amani

remained unfinished. He had to do without reaching the first goal, which he granted at the end of his trip, "We had to leave some questions unanswered about human trypanosomiasis, mostly of a theoretical nature."[83] He was pleased with the first supposedly successful treatments for the infected on the Ssese Islands and the local population's trust in his therapy. Still, even this therapeutic success was only fleeting. His successors increasingly questioned the long-term effect of these remedies on the disease. As early as 1909, a doctor stationed in German East Africa considered the impossibility of an absolute cure through atoxyl begins to show. Given these limitations of the success of Koch's controlling measure, his expedition is rated as failing in some of its initial objectives.[84]

Despite the expedition's shortcomings, one should not underestimate the influence of his expedition on the subsequent measures taken in the three colonies of Germany. The Koch expedition was a significant turning point for the fight against sleeping sickness in German colonialism, not only in the sense that attempts were made to treat toxicity, battle flies, and isolate the sick in the camp to a greater or lesser extent in all contaminated colonies in Germany. However, contrary to his intentions, even the activity of the Koch expedition had made visible the difficulties his successors in Africa had to deal with. The fight against the tsetse flies could only be carried out under the conditions that large flocks of flies were found in the bushes of the water and that inexpensive local labor for deforestation was present. The colonial government had to comprehensively oversee the local population's marital status and traffic to integrate the camp's sleeping sickness.

The medical staff involved in controlling epidemics often asked the colonial governor to take decisive measures to make it easier to combat the disease. Still, these policies were incompatible with the interests of the colonial government. The incompatibility between these

policies and the colonial government is down to Dernburg's reforms, in which he stated that "reconciliation with the Africans" was the goal and the attention of the colonial governments should be directed to "protecting the feelings of the local population as far as possible."[85]

The Koch expedition had expected the limits of the fight and clarified that none of these measures would cause a thorough eradication of the disease. The following chapters deal with the history of the control measures taken differently in the individual colonies.

Fighting Sleeping Sickness in East Africa (1906-1914)

In October 1907, Robert Koch ended his service as the head of the Sleeping Sickness Commission and returned home to Germany due to declining health and old age. Koch's departure meant that the fight against sleeping sickness in German East Africa was taken over by his "apprentices" who participated in the expedition and learned Koch's methods for combating the disease from their "master." Koch instructed that Dr. Feldmann and the senior physician Dr. Beuer should continue focusing on Lake Victoria's eastern bank. In contrast, the other senior physician, Dr. Kudicke, wanted to focus their efforts on the west coast of the lake from June 1907.[86]

From the eastern shore of Lake Tanganyika, which Koch had never visited, the station doctor, Dr. Neubert, reported to the head of the expedition that the contaminated villages on Lake Tanganyika were scattered over 170 km.[87] After a meeting of the Reich Health Council on November 18, 1907, Dr. Kleine was stationed at Schirati on the east coast of Lake Victoria, and Dr. Feldmann was then stationed at Lake Tanganyika.[88]

These doctors involved in the fight against sleeping sickness were primarily interested in recording those infected in the individual epidemic areas as comprehensively as possible and interning them in the infirmary, which had already been partially started based on Robert Koch's

instructions at Lake Victoria but had always encountered difficulties. Although his successors also tried to eliminate these problems that accompanied the coercive measures, they were confronted with resistance from the indigenous population or, sometimes, the regional colonial administration. In the following, we will discuss the measures taken in the individual epidemic regions to realize the "complete" isolation of the sick proposed by Koch, the problems the doctors had to deal with in this process, and the compromises they finally had to make in the face of the hostile attitude of the local population.

Sleeping Sickness Camps in East Africa

The Koch expedition (May/June 1907) set up a camp on the western coast of Lake Victoria in the village of Kigarama (Sultanate of Kisiba). The camp stood on a mountain and was an hour and a half's walk from the British border in Uganda. The camp's locations were chosen for a few reasons. One was near other villages with numerous people infected with sleeping sickness, and two, it was selected to be near the town of Kigarama "to have a better view of the sick and to be able to carry out regular treatment."[89]

Due to a lack of German personnel to find the sleeping sick or suspected of illness, Dr. Kudicke relied on the cooperation of the locals, who were trained in palpating the glands to see if someone had swollen glands, a tale sign of a Trypanosoma infection. These "gland finders," as Kudicke called them, received a reward of eighteen rupees for each newly found patient, which "contributed to the exaltation of the colored helpers." The average monthly salary of migrant workers employed by the British colonial government at that time was four to five rupees. In comparison, minions in the service of German East Africa received an average of three to four rupees a month. From January 1 to March 31, 1908, a total of 85 patients were found again by the locals, and the number of internees was 425 on September 30, 1907, and rose to 640 in late

April 1908.

Establishing the camp and an infirmary benefited the neighboring Sultanate of Kasha. The camp was close to the homes of infected locals. However, the camp was not as advantageous to the neighboring Sultanate of Bugabu. The Kigarama camp was five hours away, and the local Kisiba people and the Bugabu populations did not get along.[90] To address this issue, Dr. Kudicke instructed the Sultan of Kisiba (Mutahangarwa) to build makeshift huts near the camp for the traveling Bugabu people so the two populations did not have to interact. Following the construction of these huts, Dr. Kudicke reported on October 01, 1907, that 30 "Bugabu people" would form a separate settlement in these huts while 130 sleeping sick people from Bugabu were interned in the Kigarama camp.[91]

However, this attempt to locate the residents far from the camp was unsuccessful due to the fierce resistance of the Bugabu locals. Instead, outpatient treatment for the sick was suggested, and in July 1908, a camp in Kishanje was established. The camp reflected Kudicke's efforts not to force residents to intern strictly but to promote their "spontaneous" visit to the camp and to treat as many patients as possible with Atoxyl. Those treated in the camp mostly brought their relatives to care for the sick, and those who could not work and had no relatives were given free meals, partly in cash (two hellers per day and head) and partly in kind. The lightly ill had to earn a living themselves if they could work.

Dr. Kudicke had to win the local population's trust to treat the camp's octopus. The success of the fight against sleeping sickness in Kigarama also depended on the "voluntary" participation of the sleeping sickness in the measure. Supervision of the inmates was carried out by two katikiros and four East African health guards, but the staff was insufficient to stop the inmates' escape. At the beginning of 1908, Kudicke was satisfied with the behavior of the patients, who

put trust in the government's measures and felt comfortable in the camp. The "open" camp and the "easy" internment of the sick, introduced due to the lack of personnel and financial resources in the fight against epidemics on the western shore of Lake Victoria, also existed on the other side of the lake. The following section is intended to deal with the camp policy on the eastern coast of Lake Victoria, which is being followed, and more importantly, to what extent the measures implemented deviated from Robert Koch's original proposal for "complete" camp isolation due to the conditions there.

East Coast Camp

Dr. Feldmann, the successor to Robert Koch, was tasked with setting up a medical center in the Schirati area. He identified 164 sleep-sick victims and warned of the endemic spread of the disease in the Mori River system, where the proven infection rate increased to 35%.[92] He considered the location of the district station, Shirati, suitable for the "concentration camp" because it was no more than eight hours away from the district's most distant sleeping sickness centers.[93] The camp was built with a barrack for the seriously ill, two barracks as workrooms for examining and treating the sick, and native-style dwelling houses that were supposed to accommodate around 300 patients. At the time of the opening of the camp, the number of people treated with atoxyl was already 217.[94]

Dr. Kleine identified two significant drawbacks of the camp. First, there were substantial financial costs associated with catering to the camp inmates. Second, the camp was located far away from the largest epidemic area on the Mori River, which made it less effective in isolating the disease. Dr. Kleine documented these issues and was appointed as the head of sleeping sickness control in Shirati on February 3, 1908.

In November of 1907, Dr. Kleine discovered that 100 sleeping sick people, most of whom

came from the Kirugu countryside, had withdrawn from treatment in the Schirati camp.[95] Dr. Kleine and his companions traveled to Kirugu to investigate the extent of the spread of sleeping sickness and to discover if the patients Dr. Feldmann had identified still lived in their home country.[96] The residents of Kirugu reacted differently to this examination by Kleine than that conducted by Feldmann, who had examined several hundred people. Kleine's report shows that the locals were more afraid of transporting the ill to Schirati than of the examinations themselves and that the isolation measure taken by Feldmann disregarded the living conditions of the residents.[97]

Dr. Kleine's examination of 97 people in Kirugu revealed a crisis-like spread of the disease, with more than a third of those examined having swollen glands and trypanosomes. Ordinary control measures had to be taken in the villages on the Mori River, with the colonial administration estimating that around 5,000 people who were in unhindered communication with the epidemics lived on the riverbank.[98] Dr. Kleine thought taking the infected persons immediately into atoxyl treatment was necessary. Still, the strict internment of the sick in the Schirati camp was no longer an issue since it was a matter of light sick people who "felt completely healthy" and "did not believe in their illness."[99] To gain the local population's trust, a "treatment station" should be set up in the Mori area, where a doctor should constantly deal with the polyclinical therapy of patients resident near this ward.[100] Of course, the new treatment station had to be built in an area not so far away from the tsetse flies.

In April 1908, Dr. Kleine traveled to the Mori River area and discovered that the fly occurred in the neighboring Utegi landscape rather than Kirugu.[101] The new sleeping sick area was established on June 9, 1908, under the direction of the tropical doctor Dr. Patrick in Utegi.[102] The camp consisted of 30 straw huts, one apartment for the camp doctor, and several huts for the

askaris.[103] However, by opening the camp in Uteri, the doctors did not realize Koch's suggestion of "total" internment of all sleeping sick people.

When the Utegi camp was opened in 1909, it was planned to send the sick from the Schirati area to Utegi due to the high cost of living.[104] However, this plan was resisted by the Kirugu population, who developed a negative attitude toward the permanent isolation of the sick in the camp. After the non-commissioned medical officer began outpatient treatment, the residents only had to go to the treatment station every 13th and 14th day for Atoxyl treatment.[105] This shift in therapeutic focus could be observed on both sides of the lake, with the isolation of all sleeping sick in "concentration camps" utterly absent on the East Coast.[106] The medicinal treatment of the patient, in particular after the failure of the isolation policy, emphasized the "treatment stations" set up in different locations, in which the patients were only cared for on an outpatient basis.

The doctors on the east coast of Lake Victoria tried to enforce health isolation even more strictly than on the west coast, as they were aware of the disadvantages of polyclinic treatment. The doctors stationed in the Shirati district set up a new camp in Utegi to isolate the sick people who settled on the Mori River, but this caused resistance from the residents. Feldmann also promoted complete isolation of the sick and tried to stay true to Robert Koch's principles. Still, he felt entitled to use the support of the local colonial administration to implement his policies. Feldmann often behaved haughtily towards the colonized and against the colonial officials of the local administration, making it difficult for him to fight epidemics.

Lake Tanganyika Camp

Dr. Feldmann's expedition to Lake Tanganyika was only provided with 5,250 rupees from the colonial budget.[107] With the support of the local colonial administration, the expedition identified the sick and transported them to the "expedition camp."[108] Dr. Feldmann forcibly

isolated all sleeping sick people he found in the camp, just as on Lake Victoria, causing the passive resistance of the local population to escape treatment. By the beginning of February 1908, Feldmann had examined more than 1,000 residents of Udjidji and identified 80 sleeping ill people he wanted to accommodate in the Niansa camp.[109] Five of the other 47 patients who had remained loyal to him were already considered unfit for transport because of serious illness, so only 42 were transferred to the expedition camp in Niansa.[110] Feldmann stuck to the "forced internment" of all sick people and rejected the idea of considering transitioning to outpatient treatment of the infected.

Dr. Feldmann criticized the colonial administration and the resident commander of the Urundi district, Captain von Grewert, for their behavior in Usumbura. He accused the resident of trying to influence the locals with his political authority to ensure the internment of the sick of Udjidji in the Niansa camp. The resident objected, saying that the prohibition of further sleeping sickness control had been a "matter of life for [the] station" and forced internment would deprive them of their freedom of trade and commerce.[111] The colonial Germans had to recruit workers from the majority population in their area to help them fight the disease.

Dr. Grewert argued that if strict measures were taken to combat the epidemic, many of the population would become opponents of the Germans, leading to the "desolation of the landscapes." He proposed that the sick should be treated in the local countryside instead of being housed in a faraway camp and that the colonial Germans had to recruit workers from the majority population. His colleague, the captain of the East African *Schutztruppe*, and the former resident of Urundi, Goering, criticized Grewert's approach, and the head of the entire sleeping sickness control in East Africa, Dr. Kleine, rejected his approach. In July 1908, Feldmann's "triumph" over the station officer, who was cautious in his coercive measures, seemed clear. He

recommended establishing a sick camp in Udjidji and Usumbura and increasing the number of camp guards but simultaneously limited to 25.[112]

Dr. Kleine rejected the use of force by the colonial administration against the disobedient population and requested that these camps be set up for outpatient treatment by Atoxyl. He met with Dr. Feldmann in Usumbura at the end of August 1908 and discussed modifying the sleeping sickness control method. Dr. Feldmann reported that some of the camps' infirmaries had been fenced in with barbed wire to prevent their inmates from escaping and that the "dangerous and very seriously ill" and the sailors were "permanently" interned in the camps.[113] Dr. Kleine was regarded as Robert Koch's true successor and claimed that the drug atoxyl was so "extraordinarily valuable and indispensable" that the trypanosomes would usually disappear from the patient's blood when injected.[114]

Sleeping Sickness Treatment in East Africa

The German-East African treatment of sleeping sickness was mainly based on the polyclinic therapy of the patients, and the tropical doctors involved in the fight had to convince the local population that the medicines used would have a positive effect on the condition of the sick and that the spontaneous visit to the camp could be of great benefit. Regarding atoxyl treatment, Robert Koch recommended a double injection of 0.5 g of atoxyl each time, repeated with a break of fifteen to twenty days.[115] However, this treatment method could not overcome the recurrent occurrence of the pathogen, which forced the native patients to undergo camp therapy for months or years. The colonial physicians tried to get as many sick people as possible to undergo treatment by employing the native "glandular feelers" or introducing a bonus the sick received as a reward for voluntarily attending the camp. Still, their hopes were fulfilled only to a limited extent.

German physicians had to choose between using atoxyl, a successful healing drug, or trying out new drugs. Dr. Paul Ehrlich, Director of the Royal Prussian Institute for Experimental Therapy in Frankfurt am Main, created two new arsenicals, arsacetin and arsenophenylglycine, which showed promise in treating infected animals. However, these drugs proved to be toxic for human trypanosomiasis patients, causing skin rashes, blindness, and organ disorders, and in severe cases, even death. As a result, the Imperial colonial office ordered the governor of German East Africa to stop using these drugs temporarily in September 1910. Physicians lost interest in the therapeutic measures, and the search for alternative medicines began. The local population's response to the new drugs was also a factor. This article introduces the tsetse fly process and the atoxyl treatment course in German East Africa.

Atoxyl Treatment

In 1908 and 1909, attempts were made to assess the more precise effect of Atoxyl by modifying the method of administration. Dr. Kudicke, a staff physician in the Bukoba district, experimentally stopped Atoxyl treatment in 27 patients who had been receiving treatment for at least a year and had "felt well during the last period." However, the condition of fifteen patients deteriorated soon after that, and one died of meningitis.[116] His successor, Dr. Ullrich, made similar suspension experiments in 406 patients under medical treatment in the Kigarama/Kishanje camp for more than a year and in whose blood they had detected no trypanosomes for a long time. However, by the end of March 1909, 51 patients (about 12%) were confirmed to have recurrent Trypanosomes in their blood.

The treatment of the other 26 patients was quickly resumed because their conditions worsened to such an extent. Of these 77 patients, nine had died. These experiments showed that even if the condition of the patients showed a clear improvement during the cure period,

discontinuation should be avoided at all costs.

In the second quarter of 1908, Dr. Kudicke reported that Atoxyl treatment, if given for more than a year at 14-day intervals, often led to the blindness of the patients.[117] In July 1908, he conducted a trial in which the gap between double injections of Atoxyl was extended to twenty days, hoping it would cure the patients without unfavorable side effects. The results were undesirable, as for the 139 patients whose 20-day atoxyl injections had begun either in early or mid-July 1908, nine deteriorated without the Trypanosoma being detected in their blood, and sixteen others were found recurrently in the blood.[118] Dr. Ullrich reported in the first quarterly report (January-March) 1909 that of the 27 relapses identified in the Kigarama/Kishanje camps between December 1, 1908, and March 31, 1909, trypanosomes recurred in thirteen sleeping patients.[119]

When discussing the side effects caused by Atoxyl treatment, the interval between injections and the quantity administered were not only questioned. The senior physician at the Bukoba sanitary station, which was set up for outpatient treatment of sleeping patients, Dr. Buschhaupt, reported on April 1, 1909, that one patient went blind after twelve doses of 0.5 g of atoxyl.[120]

From April 1 to June 30, 1909, two cases were observed in the camp where the sick went blind four and five months after discontinuing atoxyl treatment.[121] This situation also applied to the other epidemic areas of German East Africa. Dr. Scherschmidt, who was responsible for the administration of the Utegi camp established in the Shirati district, reported that of the 265 patients treated with Atoxyl in the center, 15 had deteriorated between October 1 and December 31, 1909, and that twenty sick people had died.[122] At Lake Tanganyika, the staff physician, Dr. Feldmann, followed Koch's prescription of the dosage of the drug quite faithfully. Still, the double injection of Atoxyl was repeated at Tanganyika only with the 9–10-day break. At

Usumbura camp, Dr. Breuer began treating three patients with atoxyl as early as the end of 1907, but by March 1908, one had died from the "influence of the atoxyl treatment." Even if the patients were spared the lethal effects, they were still in danger of going blind. Despite the "regular" administration of the drug, the problem of "atoxyl-fast" Trypanosomes also occurred on the Tanganyika during the therapy. After eight to fifteen double injections, the patients were discharged from the camp therapy, even if not cured.

Dr. B. Eckard, the camp physician at Utegi, regretted that atoxyl could only cure patients "definitely" in a few cases.[123] Dr. Kudicke also noted, "The further experiences I have had with the Atoxyl treatment correspond only to a small extent to my expectations."[124] The camp physician in Usumbura, Breuer, also judged that Atoxyl could exert a temporary positive influence on the clinical picture but hardly promised a lasting cure, especially a complete cure.[125] Medical experts came to even more pessimistic views in the fight against sleeping sickness in German East Africa. Feldmann noted, "Several people who underwent an atoxyl cure 1 and 1⁄2 to 2 years ago… are apparently in excellent health."[126]

Two years after the end of the last cure for sleeping sickness in German East Africa, Dr. Eckard still had not made a definite judgment on treating the disease.[127] His statement reflected those attempts at substitute medications for atoxyl had reached a dead end, as mercury was administered to some of the sick by injection and by a "lubricating ointment." The infusion of mercury had considerable side effects on the sick, while no apparent healing effect was observed.[128] When the gray mercury ointment was rubbed on the skin of the treated, they suffered from itching and scratching caused by the skin rashes.[129] In addition to mercury, the "ammonia preparation" or the arsenic mercury preparation "Enesol" produced in France was used experimentally. The rashes of most of the sick who went to the camp only on an outpatient

basis worsened, showing that the cure with this substance was not suitable for polyclinic treatment.

In German East Africa, drug treatment increasingly depended on atoxyl, with 252 of all 349 patients treated it between July 1 and September 30, 1909.[130] In the Kigarama/Kishanje camps on the west bank of Lake Victoria, 409 of 569 patients received double injections of atoxyl between April 1 and June 30, 1909, and in the Usumbura camp on the Tanganyika River, 208 patients received it in the last quarter of 1910.[131] The colonial physicians had no choice but to continue using atoxyl to treat the sick despite its limited healing effect, as they and the colonial authorities in Berlin were waiting for the invention of a new drug. Dr. Paul Ehrlich was trying to produce improved arsenic-like remedies and had achieved excellent success with two substances in animal experiments.

Chapter 3: Sleeping Sickness in Togo

` In March of 1908, a young boy was brought to the attention of Dr. van den Hellen, a government doctor in Palme, who had been deteriorating for a year.[132] Upon conducting a glandular puncture trial, the presence of trypanosomes was confirmed in the boy's glandular secretions. Three other patients with sleeping sickness were found in Salome, and the presence of tsetse flies was confirmed. Dr. van den Hellen searched for infected individuals until the beginning of August, finding 8,600 inhabitants in Gbele and Salome, where infected individuals had been discovered as early as 1903. Forty people had died from sleeping sickness within this population.[133] Dr. van den Hellen proposed eliminating shrubbery around the water source and suggested that the population of the affected areas should not work outside of their homeland for at least five years. He also recommended controlling both emigration and immigration. The last proposal that the first patient had long been absent from his homeland and was likely infected was decisive.

1908, during an expedition in Buem, Dr. van den Hellen became convinced of the importance of controlling traffic inside and outside the epidemic. He examined 5,500 inhabitants across 39 localities, registered with the first investigation in the public files in 1903, and found 38 cases of sleeping sickness.[134] Most patients received an injection of 0.5 mg of atoxyl and were sent to a local mountain near Misahöhe. Dr. van den Hellen was concerned about the spread of the disease in his Palime service district, where 2,200 residents and home traders were examined, and thirteen sleep patients were found. He suggested that the population of wholesale market towns should be placed under medical supervision and that workers employed in contaminated sites to construct roads and railways be medically observed before beginning their work.[135]

The Governor of Togo, count von Zech, approved the idea of stationing six doctors, but the

cost was a significant factor. In 1908, Governor Zech established the "Sleep Disease Commission," with Dr. von Raven and Dr. van den Hellen appointed as heads of the commission.[136] Two of the three doctors were to cover the extent of the infected areas, identify the sleep-affected, and hospitalize them with the help of indigenous police units and bush-free locality hospitals. The third doctor was to remain in charge of the inpatient housing and use medical treatment to eradicate the parasites in the infected persons.

The assignment of two doctors to Togo increased the area visited. These two doctors, Dr. Skrodzki and Dr. Zupitza, traveled to Ho, south of Misa, and Daji, north of Misahöhe, respectively. Dr. van den Hellen surveyed the countryside south of Misahöhe and Atakpame but found no sleeping sickness. The research trips discovered that the sleeping sickness epidemic had spread in the Kete-Kratsch district. The primary goal was to detect the spread of the disease. Still, obstacles such as examining the local population, detecting the sick or their internment in sickbeds, and destroying the tsetse fly made further measures to control the disease challenging for travel doctors.

Togo Travel Doctors

The travel doctors [*Reiseärzte*] expressed their worries to the governor regarding inadequate staffing from 1909 to 1914. The Sleep Disease Commission had only two doctors available for travel assignments during specific periods, and there were times when no doctors were accessible, which resulted in a scarcity of fresh information on sleeping sickness and the affected regions.[137]

The shortage of doctors was a common problem in Togo, not only among travel doctors. Immediately before the First World War, there were only nine physicians for the entire colony, who, in addition to fighting sleeping sickness, also had to perform other health related tasks.[138]

Even if a traveling physician had to interrupt his research on trypanosomiasis in the competent district for various reasons, a representative sometimes could not replace him. In this regard, the transition from the third quarter of 1911 to the first quarter of 1913 was remarkable. Engelhardt, who met Dr. van den Hellen and was to be employed as a travel physician in the third quarter of 1911, was appointed government doctor in Palime and had to give further examinations in the district of Kete-Kratsch. After the expedition to Palime on 18 September 1911, Dr. van den Hellen alone was responsible for the service of the traveling doctors.[139] At the beginning of November, Dr. von Raven began his home leave after his three-year stay in Togo. He was replaced in the Klouto camp by Dr. Zupitza, who arrived in Togo in October 1911 after his home leave ended.[140]

In 1911, the camp doctor, Dr. Zupitza, had to go on a trip, which led to the Sleeping Sickness Commission handling the management. This caused some disturbance, but Dr. Engelhardt returned in February 1912. Unfortunately, duties were again disrupted in June when Dr. Van den Hellen relocated. Eventually, Engelhardt was assigned to the camp service.[141] As a result, it was not until April 1913 that Zupitza began examinations of the local population again.[142]

Doctors combating sleeping sickness in Togo also had to handle outbreaks of other infectious diseases. Vaccinations were administered in North Kratsch, but glandular swelling examinations were avoided. Tsetse fly control was limited to ten days in December, and a travel doctor was away due to the smallpox vaccine. No replacement doctor was appointed.[143] Although the two physicians could use the time, they had available as travel physicians, their services were insufficient to combat sleeping sickness effectively. To detect infections with certainty on suspicion, it was necessary to eliminate glandular swelling and to microscopically

confirm the presence of disease parasites in the blood collected by puncture or in the epithelial fluid. However, this was too big a task for two travel doctors.[144] According to Dr. Zupitza, sleeping sickness has been confirmed in Kete-Kratsch through a microscope examination of epithelial fluid. However, he admits that population surveys have been inadequate.[145]

Due to limited time and staff, doctors often struggle to take necessary measures for suspected sleeping sickness. In one instance in March 1910, a doctor couldn't examine glandular fluid under a microscope in the Manuscripts district due to time constraints.[146] Zupitza thus presented the state of mind of the travel doctors in such a dilemma, who could not take the intended medical measures:

> The travel doctor is there, with the mass of work to be done on the one hand and the lack of time on the other, again and again, put before the conscience question, he should or must puncture in the individual case, or it can be omitted. He finds himself in a conflict over what is better for sleeping sickness control, with a continuous examination of all, even those with little probability of suspicious glands, bringing his precious time or the time saved about this time to a more promising, more frequent external examination and puncture usually to use those glands which promise a better chance of finding a positive test result.[147]

Detecting sleeping sickness had proved challenging for travel doctors due to understaffing and limited funding for the Sleeping Disease Commission. Additionally, efforts to identify and treat patients have been hampered by resistance from the native population. To effectively control sleeping sickness in Togo, local involvement is crucial. Back in 1908, Dr. van den Hellen brought a sick boy to Misahöhe and found out that his daughter was also infected with trypanosomes.[148]

According to reports from travel doctors, there was resistance from the native population towards medical examinations, causing disruptions in their work. Dr. Van den Hellen had already reported that the locals were reluctant to undergo examinations by the travel physicians even before the Sleeping Sickness Commission was established. During his travel to Misahöhe and Kratsch districts in the summer of 1908, he had the colonial authorities summon inhabitants

where some had enlarged vertebrae around the neck, a sign of potential trypanosome infection, to another village for further study. Since the site was far from their area, Dr. Van de Hellen suggested that the government take responsibility for the chiefs, inform the district office immediately of any illness or suspicion of sleeping sickness, and prevent their movement.[149]

Even if the travel doctor visited the place of residence of the population to be examined, the investigation of the inhabitants could sometimes not be completed because of their flight from the travel doctor. Dr. van den Hellen complained in his report on the work of the travel doctor in Towe that more than half of the residents had escaped the investigation. In the third quarter of 1909, in Daji, north of Misahöhe, Dr. Skrodzki reported that he had experienced such a mass exodus of the inhabitants and disappeared two-thirds of all residents before the investigation.[150]

When they learned in advance of the arrival of the travel doctors, the locals tried to leave their hometown and hide during the investigation in the next bush or steppe grass and occasionally in the neighboring villages. During the examination, the travel doctor was informed that the refugees were “out of town.” The doctor had no alternative but to trust this statement since he had no time left.

In the fight against sleeping sickness, in addition to those who were seriously ill and whose symptoms could be reliably diagnosed as sleeping sickness, "trypanosome carriers" who appeared healthy on the outside but whose microscopic examination of the glandular fluid already showed the presence of the pathogen were also sent to the camp far away from their home, although this was by no means accepted by the local population.[151] The locals came up with a "self-protection measure" where they made sure that the traveling doctor examined them for glandular swellings by hand first. As early as the spring of 1910, it was reported that those

trypanosome carriers who “felt feverishly ill or [...] were aware of their glandular swellings” tried to avoid the examination.[152] As a result, it was mainly in the Misahöhe district that severe sleeping sick patients were brought for treatment.[153]

The travel doctor managed to examine the residents and discovered that some of them had sleeping sickness. However, he was constantly worried as the locals were trying to avoid the German measures to control the disease. This often resulted in them escaping during transportation to the camp. This happened mainly in the areas that were far away from the camp at Misahöhe. Of the seventeen sleeping patients in the northern half of the Kratsch district in the summer of 1909, eight escaped during transportation “despite police supervision or escort.”[154]

Because of the negative attitude of the locals, the traveling physician was always dependent on the authority and coercive power of the colonial administration to carry out sleeping sickness. Indeed, the sleeping sickness investigation would have been better carried out if the head of the district had politically supported the population’s participation in the investigation. Zupitza reported in the last quarter of 1910 that the inhabitants of the local communities belonging to the district of Sokode were hostile to him at first but suddenly cooperated after the arrival of the district leader, Lieutenant Gaissner.[155]

During the first quarter of 1911, examinations were conducted in the district of Maungu. To ensure smooth execution, a travel doctor accompanied the district chief, who had put in a great effort.[156] The residents cooperated promptly in the search for glandular swelling as instructed by the district chief. Although the district manager’s authority and coercive power were helpful to the travel doctors, they could not always rely on it as the travel doctor could not accompany them. The travel doctors hoped that the native “chiefs” appointed by the German colonial government would take up the role of district leader, and their hopes were somewhat

fulfilled. Under the travel physician's guidance, the chiefs played a vital role in promoting sleeping sickness control locally despite behaving like the lowest officials in colonial rule.

In the summer of 1910, for example, there were meetings of the local leaders of the Sokode-Bassari district, where Dr. Zupitza "instructed" how necessary it was to enforce the control of sleeping sickness. Zupitza reported, "Through the instruction of all the [...] summoned chiefs, I received constant support from the same side."[157] In the districts where the local population was under the political influence of the local leaders, the travel doctor first had to appease the chief's concerns by making friends. Dr. Skrodzki, who traveled to the Ho region or southern Krachi in the third quarter of 1909, was distressed by the hostile attitude of the local population. Skrodzki reported the following, "The behavior of the population again gave ample cause for exhibitions. Only in a few places, where the chief had goodwill and at the same time some influence, did the majority of the population turn up for examination."[158] Dr. Zupitza agreed with Dr. Skrodzki, who wrote, "[To investigate without friction] It took long negotiations before the chief became aware of the will to summon his people."[159]

Therefore, if the chief did not accommodate the German doctor, the examinations often came to a dead end: Skrodzki, mentioned above, also expressed his dissatisfaction with the behavior of the chiefs. When he witnessed the mass exodus of the inhabitants in the Ho area before the examinations, he reported that the chiefs had tried "to conceal the fact [of the mass exodus] and to present the number of inhabitants as having been greatly reduced by deaths."[160]

In his 1909 report, Dr. Zupitza also complained that a total of 50 inhabitants of a village in Tapa on the Asuokoko River had evaded his examination "with the chief's knowledge and will,"[161] because both the head chief and the subordinate chief had guaranteed the travel doctor that the place of residence no longer existed, which later proved to be a deception.[162] In 1911,

Dr. Engelhardt was also told of the inaccurate information provided by the local leaders, which could have led to the failure of the fight against sleeping sickness in the area. He traveled to the Kratsch district in the second quarter of 1911 and often found it pointless to ask the leader of the neighboring village for information on the residence to be investigated because “the chief of the neighboring village would indicate that there were no existing places.”[163] In such cases, he was not given a local guide and had to see whether he could find a way to the next village. However, he was usually unable to reach his destination.

Dr. Zupitza, who sharply criticized the attitude of the locals towards the fight against sleeping sickness as a lack of understanding of the “humanitarian effort” undertaken by Europeans, suspected that so-called “fetishists” had the chiefs by the thread, especially along the Volta River in the Kete-Kratsch district.[164] Dr. Zupitza writes, “On the banks in the magical darkness of the dense jungle, there are several places dedicated to fetish services.” In Kratsch, the “fetish” is considered “particularly effective, powerful and sacred,” and its reputation extends far into the British Gold Coast colony. The locals would go there with their families to ask the “sorcerer” for advice - also with health matters - but this would expose them to the existing risk of infection by trypanosomes, as the jungle would form a habitat for the tsetse fly.[165] In his opinion, the “sorcerers” would be aware of a crisis because of the success of European medicine, as they would fear losing influence over the indigenous population, who would have brought them valuables in return for advice. The “fetish priests” would, therefore, tempt the local leaders under their influence to interfere with the traveling doctor during his examination.[166] Leaving aside the question of what role this so-called “fetishist” played in Togo's colonial society at the time or how he could or should be historically or socially defined, it should be noted that Zupitza related the existence of the “sorcerer” to the contrast between ”civilization” and “barbarism.”

According to Dr. Zupitza, the two epidemic areas, namely Towe and Kratschi, would represent a clear contrast in terms of the behavior of the indigenous population. In the former, a traveling doctor had also encountered resistance to the examinations in 1911, but things had soon calmed down after the district office had instructed the chiefs. In the latter, however, the social unrest and the rejection of the chiefs would have been repeated incessantly every time the travel doctor visited in 1911, causing the travel doctor Dr. Engelhardt's examination to fail.[167] Dr. Zupitza assumed that one could "explain without further explanation, that it only dealt with highly interested sorcerers and their chiefs." He put the local leader who wanted to hold him in 1911 "on the advice of the elderly and dignitaries" by investigating the locals by sending all the women and children to be examined elsewhere, as follows:

> The old, ignorant chief had to yield to the pressure of his counselors, especially as vanity and self-exaltation, together with superstition, had contributed to it. The chief of Nanumba [= a residence in Kratschi (H.I.)] Was a magician […][168]

The role of local leaders in Togo's fight against sleeping sickness was crucial, but it had two sides. The traveling doctor could not exert his authority directly on the population, so he relied on the respective chiefs to act as messengers and convey his will to their inhabitants. If the local leaders performed their expected role, the examinations were carried out relatively smoothly. However, if they refused the travel doctor's demands or did not take them seriously, the examinations were unsuccessful because the station chief did not intervene. According to Dr. Zupitza, who held a central position in the sleeping sickness commission in Togo, the unpopularity of the travel doctor was more due to the "barbarism" of the population associated with local "superstitions" than to the strict health policy measures themselves.

Although the commission and the colonial government agreed on the aim of combating sleeping sickness, the interests of the two sides often conflicted with each other, even though the

treatment of the individual was to be investigated as a domestic concern. This conflict of interest was also reflected in the attitude of the institutions to cooperate with the passive British colonial government in a joint disease control activity.

Fighting Sleeping Sickness in Togo (1908-1914)

Even before the Sleeping Sickness Commission was founded at the end of 1908, the isolation of sleeping sickness had begun. However, only to a limited extent, on the initiative of the government doctor in Palime: those infected with sleeping sickness had been isolated since 1904 on the 710m high house hill at Misahöhe, 12 meters away from Palime. The choice of this location as the camp location was due to the government doctor's view that many sick people were probably infected through "a direct transmission from person to person,"[169] but also because the local mountain was "free of tsetse flies."[170] While before Robert Koch's research trip to German East Africa (1906/07), during which he reported on the relatively favorable course of treatment with Atoxyl, the sleeping sick also died in Togo "after a short time due to the lack of any therapy"[171] without exception, since 1908, sleep sicknesses were first treated with Atoxyl on an outpatient basis according to Koch's instructions and then sent to the local mountain.[172] In the isolation camp, too, they received an injection of 0.5g of Atoxyl every tenth and eleventh day every tenth and eleventh day, an amount that Robert Koch had considered beneficial for the long-term removal of the trypanosomes in the human body.[173]

Interestingly, Dr. van den Hellen, the former government doctor in Palime, had an optimistic view of the therapy with Atoxyl for treating sleeping sickness. He believed that it was possible to cure the disease by isolating patients in a camp and providing them with intensive drug treatment. As a result, he planned a comprehensive treatment program that involved

administering regular atoxyl injections to patients in the camp for six months, followed by four months in an area free of tsetse flies. After being discharged, patients would receive regular medical check-ups for two years after their last atoxyl injection.[174]

According to this program, in 1908, as far as the medical reports of the government doctor can confirm, at least a total of 56 infected people were interned in the Hausberg camp and treated there with Atoxyl.[175] Unfortunately, little can be ascertained about the conditions inside the Hausberg camp, as the government doctor in Palime, van den Hellen, only gave a sketchy report. As a government doctor, he had to deal with other health measures in the Misahöhe area, for which he was responsible and could only visit the camp temporarily to give the inmates the injection of Atoxyl. It was difficult for him to go back and forth between his station in Palime and the camp on the higher mountain, far away from it. According to the report of the foreman at the Misahöhe district office, O. F. Metzger, Dr. van den Hellen had to climb 500 meters from the plain, rising mountain 38 times in just a few months to treat the sick, but this was a significant burden on his health.[176]

It is possible to assume that the internees on the nearby mountain didn't receive adequate medical care as they were only occasionally supervised by doctors. The treatment they received, Atoxyl, often failed when relapses of the disease occurred when the trypanosomes were not completely eliminated in the patients blood stream. Consequently, it is safe to say that the healing process didn't always proceed as per the plan of the government doctor.[177]

When the Sleeping Sickness Commission was established at the end of 1908, additional medical workers were hired to combat sleeping sickness, and there was always at least one doctor responsible for treating the sick (“camp doctor”). This was particularly interesting and scientifically necessary for the commission’s doctors by their guidelines (“Eliminating the

parasites in sick people through their treatment").[178] But this also led, as will be returned to later, to testing new drugs on people, which sometimes, if not directly, led to a fatal outcome.

The New Klouto Camp

The new camp was built on the ridge of the Klouto, near the former camp. According to a contemporary report, the new camp was planned "as an open native village"[179] to "make the camp livable and joyful for the sick."[180] The new camp prioritized the needs of sick individuals better than the old one, but it's unclear if it helped locals understand the internment. The isolation huts were built with the existing natural building materials in the usual style, and the occupants were allowed to take an accompanying person or caregiver with them from home and live with them in the hut.[181] The "Isolation village [*Isolierdorf*]" was set up in quarters according to the ethnic group and landscape of the individual patient and thus took into account "that they [...] could live according to their habits and manners."[182]

The colonial budget covered all expenses for food, lodging, and medical care of inmates at the camp. The governor reported that around 100 sick people were treated daily in 1909, with a daily food cost of 0.40M per person. 14,600 Marks annually, a sum whose considerable part of the regular budget for the fight against sleeping sickness for the financial year 1910 (60,000 marks in total) could not be neglected. The colonial government already discussed the desired reduction in 1910.[183]

> Because of the cold, damp mountain climate" on the Klouto, every internee was given a "strong woolen blanket," even if he was re-admitted as a relapse, which had to be thrown away by a sick person after use because when the sick person left, it was "usually completely used up.[184]

In addition to this regular support, the inmates were occasionally given small gifts "in the form of a reward for good behavior,"[185] for example, tobacco for men or soap, oil, and pearls for women, with the intention of "making their stay in the camp more attractive."[186]

The Sleeping Sickness Commission supported those in treatment and those temporarily cured but required six-month follow-up exams. Considering the high unemployment rates, they received a food allowance of 0.20 marks per day to cover travel costs.[187] A similar compensation for unemployment Care was also given to those accompanying the sick. As early as 1909, a companion of every ill person received 0.20 marks a day to support their livelihood in the camp.[188] As the governor claimed, this expense could be justified if the companions lost their jobs at home.[189]

In April 1910, 75% of internees had a relative with them; in the second quarter, it was only 50-60%. The Sleeping Sickness Commission wanted more companions to save costs on hiring workers for water and firewood for sick interned individuals, paying them 0.75M per day.[190]

In contrast to his successor, Edmund Brückner, the governor of Togo, Count Julius von Zech, was very firmly committed to a policy that should make the work of the Sleeping Sickness Commission smooth.[191] According to the motto "that with them [the sleeping sickness measures] the consideration of the financial implications cannot be taken into account[192]," he granted, in addition to the blessing of the food allowance, since March 1909 tax exemptions for the undergoing ill-treatment or the follow-up examination.[193] Sometimes, as " the most capable civil servant in the German Colonial Era[194]," the governor promoted a" liberalist "colonial policy during his tenure (1905-1910). During the land reform of 1910, for example, the land ownership rights of the local population were secured, and their land was thus protected from arbitrary expropriation by colonial society. It is also remarkable that the activities of big business are restricted in Togo.

In contrast, concession companies in other colonies, such as Cameroon or German East Africa, often expropriated almost unlimited land to operate plantation management on a large

scale. In 1907, von Zech also expressed his consent to the participation of the local population in local government if they were "qualified." Still, the Togolese did not participate in regional administration until the eve of the First World War.

Treating Sleeping Sickness in Togo

In 1909, the approach to treating sleeping sickness in Togo underwent a shift with the arrival of Dr. von Raven as the new camp physician. In search of a more effective solution, he sought an alternative to atoxyl, which had proven unreliable in providing a permanent cure.[195]

In the second quarter of 1909, Dr. von Raven divided 157 camp inmates into seven groups, in each of which the sick were treated experimentally with different drugs or combinations thereof as follows.[196]

Dr. von Raven reported that failure of parasite disappearance and reappearance in that arsacetin, which had been generally recommended at first, had not been very successful in this respect while noting that "a single injection of a sufficiently large quantity [of arsenophenylglycine (H.I.)] leaves a rapid and long-lasting sterilization of the blood."[197] Patients with trypanosomiasis experienced brain inflammation, but atoxyl treatment successfully alleviated symptoms without major long-term effects. Even when patients became resistant to atoxyl or arsacetin, arsenophenylglycine was more effective.

According to Dr. von Raven, using arsenophenylglycine can prevent the development of drug-resistant parasites due to its brief duration. This treatment offers the added benefit of reducing therapy time, which can help avoid side effects such as blindness commonly associated with other treatments.[198] Although Dr. von Raven initially had high hopes, the "camp treatment" of the infected proved his hopes unfounded. The camp physician could not solely use the new arsenophenylglycine for treatment and had to resort back to the previously used drugs. Contrary

to their initial assumption, by the third quarter of 1909, it was evident that the new remedy was not a cure-all, and there was hope that the parasites could disappear permanently with a single or a double injection.[199] According to his report, in most cases (18 of 25), a single infusion caused the parasites to disappear from the blood of the infected persons. Still, in the remaining cases, they immediately reappeared in the blood.[200]

In the case of a rupture, if arsenophenylglycine did not improve the condition, patients were usually treated with other drugs, which meant more arsenic rupture levels for the patients without any improvement.[201] In 1909, it was discovered that while arsenophenylglycine could eliminate parasites from the blood, it came with severe side effects that could not be ignored. The camp physician's report from that year only gave incomplete information about the two deaths caused by drug intoxication, in stark contrast to the detailed document provided earlier about the passing of a ten-year-old boy.

> In both cases, death occurred so quickly under the signs of cardiac insufficiency that the full complex of symptoms did not develop; minor jaundice was not missed. The duration of the whole clinical picture in cases coming to recovery is about 14 days.[202]

As per the camp doctor's report, after receiving the injection, severe side effects were observed which started with a fever attack on the same day. These side effects could sometimes lead to biliary colic in the liver and stomach area, resulting in bilious vomiting or even a heart attack. In the worst-case scenario, they could lead to fatal heart failure.[203] Despite the severe side effects, Dr. von Raven did not discontinue the use of arsenophenylglycine. Instead, he conducted further trials to determine the conditions that led to intoxication. The patients were divided into two groups. The first group received a single or double injection of a specific dose of arsenophenylglycine on two consecutive days. The second group received the same amount divided into four to six doses, administered to the patients within ten to fifteen days with two-day

breaks. According to the physician, there were no signs of intoxication in the former group, while in the latter, there were often "mostly severe disturbances."[204]

From these observations, he concluded that poisoning by arseninylglycine was due less to the amount of drug used in an injection than to the "repetition of the injection in more or less short intermediate spaces."[205]

Optimal Doses and Toxic Doses

Dr. von Raven learned two essential lessons when treating sleeping sickness in 1909. Firstly, one injection of arsenophenylglycine may not eliminate pathogens in the blood. Secondly, repeated injections with smaller doses can cause harm. He aimed to find the ideal dosage to treat the disease without causing harm or poisoning the patient.

Dr. von Raven presented a proposal in 1910 to evaluate the most effective and safe dosage of a drug through testing on multiple patients. The proposed methods involved either incrementally increasing the dosage until "permanent sterilization of the body" is observed or rapidly increasing it until patients display signs of toxicity.[206]

He claimed that the latter method, intended to establish the toxic dose, was essentially faster, more straightforward, and "with sufficient caution," not always more dangerous than the former. Under the circumstances that the dose optima varied considerably in different sick persons and that the inventor of arsenophenylglycine, Dr. Paul Ehrlich, seemed to recommend, after his experiments, the administration of the remedy at the "largest possible" dose for the tremendous curative success in sleeping sickness, Dr. von Raven, therefore, gave priority to the latter experimental method.[207] Dr. von Raven tested arsenophenylglycine doses on 45 sleeping patients in 1910. He found that patients who received less than 40 mg per kilogram of body weight often had recurring symptoms, while one patient had severe side effects at 72 mg per kilogram. This

ratio had not been previously considered in German colonies' treatments for sleeping sickness.[208]

According to the report of the camp physician, amounts of 50-58 mg per kg of body weight would not have caused poisoning symptoms in seven cases. Therefore, he felt justified in expressing the following opinion: "The dose of arsenophenylglycine that can be used in any case without danger and therefore should always be used is up to 50.0-55.0 mg per kilo of body weight."[209]

Dr. Raven refused to comply with the Governor of Togo's order to ban arsenophenylglycine despite reports of fatal cases in German East Africa. He believed his findings were valid and the medicine could still be used in Togo. The Imperial colonial office was announced to the governor on September 23, 1910, reporting sudden deaths after large doses of arsenophenylglycine were administered. However, the Secretary of State of the High Colonial Office considered the medical reports from Togo, which showed more successful healing with smaller doses. He requested that the Governor of Togo caution physicians to use the drug carefully and limit the dose to one gram.[210]

Although the colonial administration of Togo initially instructed the doctors to comply with the Colonial Office's order, they reacted somewhat negatively to the decree of the higher colonial authority. Although the governorate, following the order from Berlin, prohibited the doctors from using single doses of arsenophenylglycine exceeding one gram, it immediately asked the Colonial Office to "suspend [further] compliance with the orders of the decree of September 23."[211] According to the governor, restricting the highest arsenophenylglycine dose to 1.0 g meant "a complete abandonment of the entire work of the Sleeping Sickness Commission."[212] He emphasized that the commission was halfway to a complete understanding of the dose of arsenophenylglycine that promised tremendous curative success and believed that

it would reach this final goal in the future. Therefore, the governor appealed to the Colonial Office in Berlin that the cessation of medicinal research would "damage the protectorate interest most sensitively."[213] Furthermore, count von Zech questioned the authority of the colonial administration to interfere with the "freedom of scientific research." He assumed that such interventions on the part of the high colonial office had never been made before and could not be justified insofar as the matters for the assessment of which specific medical expertise had to be called upon should be "left to the dutiful consideration and care of the government physicians."[214]

Healing results of atoxyl and arsenophenylglycine varied in Togo and German East Africa. Atoxyl was more effective in German East Africa, while arsenophenylglycine worked better in Togo. The Imperial Health Office [*Reichsgesundheitsamt*] called for a meeting of experts to address the issue. The State Secretary of the Imperial colonial office also expressed the wish in a letter to the Imperial Office of the Interior that the subcommittee on sleeping sickness should occur as soon as possible because of the question of arsenophenylglycine treatment.[215]

Meeting of the Sleeping Sickness Subcommittee

Dr. Bumm, the subcommittee's chairman, opened the meeting to discuss the use of arsenophenylglycine in the fight against sleeping sickness. The meeting was timely, as the physicians involved in combating the disease were present to discuss the success of the measures so far and determine whether an individual health policy would still be necessary.[216]

The subcommittee approved sleeping sickness measures in German East Africa but had concerns about efforts in Togo. Dr. Steudel criticized the medical treatment in Togo, which used arsenophenylglycine. He also pointed out that few attempts had been made to eradicate tsetse flies. Despite objections, the imperial authorities believe trying to eradicate tsetse flies in Togo as

soon as possible is essential.[217]

The speaker presented two medical reports as evidence. One report showed that seven patients died after taking high doses of arsenophenylglycine, and the second report stated that eight outpatients died from poisoning. Dr. Steudel suggested using atoxyl instead of arsenophenylglycine for treatment in Togo and recommended banning arsenophenylglycine due to reports of deadly side effects in German East Africa.[218] However, Dr. Ehrlich and Dr. Zupitza were skeptical and questioned the treatment results in German East Africa instead of addressing the problem of intoxication presented by Dr. Steudel.[219]

Dr. Ehrlich believed sleeping sickness in East Africa, Cameroon, and Togo might be caused by different pathogens. He questioned the quality of water used to dilute arsenophenylglycine. Dr. Zupitza agreed with Ehrlich and suggested deaths were caused by drug decomposition.[220]

During a meeting, supporters of arsenophenylglycine emphasized its storage to prevent a ban on its use in Togo. However, a lack of evidence prevented a unanimous negative opinion on its treatment potential. Some thought it was too soon to judge its appropriateness for experimentation. Despite safety concerns, the subcommittee only demanded regular reports on its success.[221]

After a meeting of the Imperial Health Office, Berlin's central government had doubts about the drug treatment in Togo. The Royal Institute for Infectious Diseases responded that the internment of sleeping patients would not be feasible and that the use of arsenophenylglycine could lead to social unrest. The Institute recommended the use of outpatient atoxyl treatment instead.[222]

The Berlin colonial authority recommended outpatient treatment to maintain colonial social order in Togo, based on the example of German East Africa.[223] However, Zupitza disagreed,

stating that the Imperial Colonial Office was not well-informed of the conditions in Togo. Zupitza submitted a report of over 150 pages to the High Colonial Office in Berlin, in which he cited medical reports from German East Africa and Togo to demonstrate the unsuccessful fight against sleeping sickness in German East Africa and how much better it was going in Togo.[224]

The governor of Togo agreed with Zupitza that the arsenophenylglycine treatment would be more effective in controlling sleeping sickness. He refused to send Dr. Kleine to Togo. Dr. Steudel was sent to inspect the situation but only visited at the end of German colonial rule. The controversy over the use of arsenophenylglycine versus atoxyl remained unresolved. The Imperial Colonial Office banned arsenophenylglycine in Togo, but it was still given to inmates at the Klouto camp. The dose of 50-55 mg per kg was considered safe until the last quarter of 1911 when it was reduced to 40-45 mg per kg, but cases of poisoning still occurred.[225]

Arsenophenylglycine treatment, however, had to be entirely discontinued in 1912. The remedy, made free of charge to the camp physicians in Togo by Paul Ehrlich, was no longer available because Ehrlich had to stop producing it due to the high costs. The camp physician Zupitza, therefore, began an attempt to use "Salvarsan" as a substitute for arsenophenylglycine, which had been used in Germany to treat syphilis.[226] In the medical report of 1912, Zupitza expressed the hope that he would soon be able to provide information about the healing effect of Salvarsan or the improved "Neusalvarsan" on sleeping patients, "even if, given the short time available, we cannot yet speak of outstanding successes.[227]

However, the Neusalvarsan and Salvarsan treatment was nothing more than a "human experiment" because the camp physician only tried to determine the toxic dose. During these experiments, quite a few inmates died of poisoning again, or the treated suffered severe pain due to the experimental combination of intravenous, intramuscular, and infra-spinal injections, which

caused the resistance of the internees and unrest in the whole sleeping sick camp. As with arsenophenylglycine treatment, relapses and recurrence of trypanosomes could not be avoided with Salvarsan.[228] With the outbreak of World War I, the German colonial administration's efforts to combat sleeping sickness in Togo were abandoned. The medical commission's dream of finding a "panacea" was finally unrealized.

The End of Treatment in Togo

During German colonial rule, Togo and German East Africa had different beliefs about which drug was more effective in treating sleeping sickness - arsenophenylglycine or atoxyl. Trials were conducted with both drugs, but neither proved to be significantly more effective than the other. Arsenophenylglycine was more toxic in German East Africa, while in Togo, its effects were sometimes praised for being faster and more pronounced than Atoxyl. Ultimately, both drugs had their advantages and drawbacks despite the severity of the infection.

Sleeping sickness treatments in colonies varied based on administrative structures. In Togo, infected individuals were isolated and treated in a supervised camp, while outpatient treatment was standard in German East Africa. Observing patients during internment helped with chemotherapeutic experiments, but outpatients in East Africa often evaded therapy and hindered observation. Doctors in Togo could treat patients with less fear of rumors spreading. East African doctors were hesitant to administer arsenicals without the trust of the colonized population.

In Togo, physicians had to resort to extensive therapeutic measures to control disease when other options failed. Dr. Zupitza opposed the inadequate consideration of disease control measures in Togo compared to German East Africa. He sought a fair assessment and challenged Robert Koch's authority in sleeping sickness control.

The central authority's decision-making processes were questioned when it was revealed that

a narrow circle of authoritative academics exclusively made critical decisions. However, these academics were not thoroughly familiar with the colonial situation. Despite successfully banning arsenophenylglycine in all colonies during a meeting of the Imperial Health Office, Dr. Zupitza and Dr. Paul Ehrlich did not always agree. When Paul Ehrlich decided to stop supplying the agent free of charge due to the significant costs involved, Dr. Zupitza criticized him for no longer wanting to be involved in sleeping sickness control in the German colonies.[229]

The account below details the efforts to control sleeping sickness in Cameroon, which presented unique challenges compared to German East Africa and Togo. Unlike German East Africa, Cameroon was not closely monitored by officials in Berlin. Additionally, Cameroon doctors could not enforce a comprehensive control project through coercion, as was done in Togo. The upcoming chapter will explore how they navigated these problematic circumstances to combat the disease.

Chapter 4: Sleeping Sickness in Cameroon

Developing a sleeping sickness campaign in Cameroon was inconsistent compared to German East Africa or Togo and took place in several stages. Starting on May 27, 1907, the delegation physician Dr. Ziemann reported that eight sleep victims had been found in Duala in May alone, and four of them were placed in the isolation barracks for treatment. Ziemann's microscopic blood tests in which he detected the pathogens.[230] He gave experimental injections of atoxyl to severe illness, which led to "considerable improvement."[231] Given the positive effect of the atoxyl, he ordered even larger quantities of the drug from the Reich Colonial Office.[232]

The fact that sleeping sick people had been found in the commercial center and capital of Cameroon prompted Dr. Ziemann to carry out forced isolation of the infected.[233] At the doctor's request, the Governorate of Buea called for a research trip near Duala to locate sleeping sick victims. The government physician, Dr. Ufer, set out on behalf of the Colonial Government on 13th June 1907 for a three-week mission on the lower reaches of the Wuri River, which flows into Cameroon.[234] However, Dr. Ufer's intentions, under the Duala population, to find out about the sleeping sickness and grasp the extent to the disease spread met with the inhabitants resisting treatment[235].

Dr. Ufer had to admit that the three weeks he had been "too short" to solve the task and relied on information from the local population, which he doubted was valid.[236] Until the last moment of his campaign, Dr. Ufer does not locate a single patient or suspect.[237] Even after Dr. Ufer's unsuccessful expedition, the Duala's resistance brought the colonial administration's plan to find and isolate sleeping sickness patients to failure. The Governor of Cameroon, Dr. Theodor Seitz, complained to the imperial colonial office that the population of Duala was trying to protect the sick in the bush camps when they were diagnosed with sleeping sickness.[238]

The locals' distrust of the German health policy was almost impossible to eradicate since there was an unbridgeable conflict between the colonial authority and the Duala regarding the fight against malaria in the city. For "hygienic reasons" or economic reasons, the governor of Cameroon, Dr. Theodor Seitz 1910, induced the residents to move out of the city quarter and reserve the land, thus usurping the Europeans into a residential and business district.[239]

The governor had the support of the other colonial officials. As a colonial physician explained, the removal of the local population would lessen the risk of infection from malaria among European residents, and one district official expressed the view that the spatial separation between Africans and Europeans "should be challenged" and unfavorable considered the development "to end social and political equality with indigenous people."[240] Despite the fierce resistance of the Duala, the governor, with the help of the German colonial defense force, put into effect the forcible takeover of the indigenous dwelling until this procedure was demanded. The Reichstag was finally closed in March 1914; "a large part of the houses and huts of the Duala had been aborted."[241] The Duala lost confidence in the Germans and sought to prevent measures to combat sleeping sickness.

Therefore, the colonial administration had already renounced the fight against sleeping sickness. However, even more decisive for this omission was that the further the rule of the Germans in Cameroon was enforced, the more the extent of the epidemic was confirmed. Most new outbreaks were far from the coastal administrative and commercial centers, mainly along the broad river in the jungle. To enforce the control measure, much larger funds or a larger workforce had to be used there than would have been necessary for combating epizootic diseases in the coastal area.

Sleeping Sickness Campaign in Molundu

The Director of Tropical Diseases and Tropical Hygiene at the Royal Institute for Infectious Diseases, Dr. Claus Schilling, undertook a study trip to West Africa in 1907 and warned the Berlin government of the prevalence of sleeping sickness in the French Congo. Schilling stated that the neighboring German colony of Cameroon was "seriously threatened" by sleeping sickness being introduced by the Congolese.[242] He recommended finding those afflicted with sleeping sickness and treating them with Atoxyl in line with Robert Koch's instruction.[243] Dr. Giesler investigated the spread of sleeping sickness in Bueade and found no cases near Lomie. However, ten native men in Molundu showed symptoms and died. The GSK society's presence in the area increased the risk of epidemics. Dr. Giesler found tsetse flies on the riverbank and confirmed trypanosoma in 8 GSK employees, expressing concern over the potential spread of sleeping sickness in the Molundu area. Dr. Giesler instructed the GSK shipping captains to recruit people cautiously and reject anyone suspected of being infected with the disease[244] and allowed the traffic to begin in cooperation with the French colonial authority at the border of the two colonies to inspect and inspect local travelers for medical examination.

Sleeping Sickness Campaign in the Upper Reaches of the Njong River: Akonolinga

The colonial administration of Cameroon found it appalling that a much higher number of sleeping sick people were found in the center of the German colony in July 1910. Dr. Freyer, who had been assigned to Molundu to study and control sleeping sickness, visited the Njong River about 300 km from Duala and found three sleeping patients.[245] The river was 50-60 m wide, and its waters were covered by reed grass, which formed a floodplain area of up to two kilometers wide and provided favorable living conditions for the tsetse flies.[246] The riparian population was eager to fish, which allowed the disease to spread on a large scale. From July 8 to 15, 1910, 583 locals (210 men, 190 women, and 183 children) were infected with

trypanosomiasis, with 30-65% of adults and 50-100% of children infected.[247] Dr. Freyer concluded that about 20-30% of the riparian population is infected and excluded the measures necessary to control slaughter sickness and the extinction of the fly.[248]

Dr. Freyer recommended that the local sleeping sick be placed under medical or official supervision, such as the construction of a "collective camp" in Akonolinga, the stationing of a "travel cure" to identify the sick, prohibition of the employment of workers, and medical supervision of canoe traffic.[249] In August 1910, Dr. Freyer ordered the governor not to go to Mongol but to stay in the upper clan, and in the following year, the number of sleep-ill people treated in Germany had increased to 45. The governor of Buea reported to the Imperial colonial office that the medical officer Dr. Eckert found eight sleep victims in the Ebolowa district.[250]

Sleeping Sickness in New Cameroon

The "Agadir Crisis" of 1911 had an unforeseen impact on the efforts to control sleeping sickness in Cameroon. The political aftermath of the crisis resulted in Germany receiving a portion of the French Congo colony, neighboring Cameroon, as compensation for their concessions in Morocco, as outlined in the November 4, 1911, conventions after lengthy diplomatic negotiations between Germany and France.[251]

For colonial doctors in Cameroon, it was crucial that this "new Cameroon," ceded by France, was, according to the reports of the French doctors, a particularly contaminated area for sleeping sickness. The director of the Institut Pasteur to Brazzaville, Dr. Aubert, 1911, reported that the city of Carnot (or Member) was the primary source of infection at the river Sanga, which ran in the middle of the strait since up to 20% of the population of Trypanosomiasis was affected.[252] According to reports of other French physicians, they were in a village on the Sanga between Carnot and Bania. In 1906-1908, more than 200 residents died of sleeping sickness.[253] The senior

medical officer of the Cameroonian Protective Force, Dr. Kuhn, who was stationed in Duala but had never even entered the newly acquired territory, concluded that the disease prevailed in the Sanga region.[254]

The addition of New Cameroon made the German government prioritize anti-seizure efforts. Research on trypanosomiasis was challenging due to financial constraints. The Governor of Cameroon expressed concern over the staff shortage in the fight against sleeping sickness. “It is impossible to get rid of sleeping sickness in the doctor’s and a medical officer’s health care professional, nor is it possible to do so. There is no more staff at the moment.[255]”

During colonial times, the doctors in Cameroon had limited resources, which hindered their ability to assess the health status of the local population accurately. As a result, colonial doctors’ reporting was sporadic, and only a handful of reports were sent to the Imperial Health Office, which was responsible for collecting clinical data from colonies and devising measures to combat tropical diseases. In March 1912, the Office’s President expressed his displeasure at the lack of information about sleeping sickness in Cameroon.[256]

However, the colonial office was relatively powerless in this regard, as the polluted interior of Cameroon was poorly developed and under-managed, and the inhabitants could escape the colonial authorities’ influence. Thus, the State Secretary of the colonial office had to admit on April 19, 1912, that the reorganization of the new Cameroon to the German side had not yet occurred.[257] In 1910, the colonial administration requested an increase in personnel to control sleeping sickness in Cameroon. The Colonial Office asked the Imperial Finance Administration to increase the budget for this purpose, but they refused, as it would have exceeded the total colonial expenditure for that year. As a result, the increase in personnel did not happen.[258]

Due to territorial cession in 1912, Cameroon faced challenges combating sleeping sickness.

External offers were made, but their impact on the colony's health policies is uncertain.

Dr. Kleine in Cameroon

The Imperial colonial office intended the first offer of assistance to solve the shortage of personnel or expertise in Cameroon by sending doctors trained in German East Africa to combat sleeping sickness. In the early 1900s, a plan to study the tsetse fly in Cameroon and Togo was delayed. Dr. Taute was suggested for the task, but the governor in Dar es Salaam refused. Dr. Fehlandt was recommended instead, but the Imperial colonial office wanted Dr. Taute. The governor refused to comply.

> I report obediently to your Excellency that the staff doctor Taute has agreed to use in Cameroon in principle. For my part, however, I have to insist on such a transfer, by which the interests of German East Africa are severely damaged, based on the German version of this law. Recalling the report on June 27, 1912 [...] Once more, I obediently and urgently request that I refrain from transferring the aforementioned medical officer, who is not superfluous in the fight against sleeping sickness.

The Imperial colonial office finally relented to the governor's request and on September 7, 1912, the State Secretary announced that he had been relieved from duty under Dr. Taute and wished to withdraw from Cameroon.[259] Because the Colonial Office, Dr. Fehland, considered it unsuitable for posting because of its lack of experience in the fight against sleep, the Office now focused on the detailed planning of the previous mission of Dr. Kleine.[260]

Grants from the Reich Office of the Interior

During Robert Koch's research trip to German East Africa, the Colonial Office initially agreed to fund the study of sleeping sickness but later reneged on the agreement. The State Secretary of the Interior suggested using the remaining funds to finance the journey of Dr. Kleine and Dr. Fischer. The Reichstag Budget Bill 1911 allocated 25.6 million Goldmarks for studying sleeping sickness.[261] Dr. Taute had applied for the remainder of 3,063,000 marks for Dr. Kleine's journey for his new expedition to German East Africa.[262] Dr. Kleine could also use a special

subsidy of 6,000,000 marks for Dr. Taute and a saving of 2,600 marks.[263] At the end of 1913, the Imperial Colonial office judged that these grants cost the trip. Dr. Kleine, from Cameroon to Togo, whose disbursement had been denied by the Togolese colonial government, was awarded a monetary sum by the foreign office for the expedition to Cameroon and Togo. According to the report by Dr. Kleine, "to determine to what extent the behavior of the tsetse flies and the local conditions, which are related to the sleeping sickness, differ from those in East Africa."[264] On March 6, 1914, Dr. Kleine and Dr. Fischer departed from Dar es Salaam via Cape Town to Cameroon.[265]

On April 24, 1914, the two doctors arrived in Cameroon. They carried out investigations in the already mentioned epidemic areas of Old and New Cameroon until 10 August, the day Dr. Kleine learned from a dispatch of the governor in Buea from the outbreak of the First World War. As a result, the expedition had to be broken off, and the two physicians went to Buea.[266] The four-month research trip thus provided only a rough outline of the prevalence in the individual disease areas, which was, for example, the life circumstances of the Tsetse fly were on. Dr. Kleine could not continue his journey to Togo. Although it had only begun with a delay of about six months, its results could no longer influence disease control in Cameroon. He could not assume the role of health policy that Robert Koch had in German East Africa in 1906/07.

The Imperial colonial office faced challenges coordinating efforts to combat sleeping sickness in West Africa before World War I. Officials in German East Africa and Togo were better equipped than those in Cameroon, but conflicting priorities prevented enlisting help from East African doctors. Each "protected area" had become a vested interest for its governor, and objections were raised whenever the Central Office's proposals threatened political autonomy. Despite efforts to create a network for exchanging information and personnel, colonial

globalization failed to address the day-to-day challenges of fighting sleeping sickness. Dr. Kleine was eventually sent to Cameroon, but the outbreak of World War I limited the duration and impact of his mission.

Due to its limited financial capabilities, the Imperial colonial office needed more power to overcome the resistance of the colonial governors. Koch or Kleine's expeditions to study sleeping sickness were made possible by ministries other than the Colonial Office, which agreed to support travel financially. In this sense, the colonial office remained a "second-class ministerial" and, in fiscal terms, still dependent on the others.

Fighting Sleeping Sickness in Cameroon (1908-1914)

As previously stated, colonial doctors faced a difficult situation in Cameroon when attempting to control sleeping sickness. They could only begin their project in 1911 without financial or human support from outside the Colony. Despite the lack of funds, the colonial administration did not allow deforestation near the river. Instead, they hired many locals to assist with the project. Due to the insufficient establishment of German colonial rule in Cameroon, the medical profession could not relocate the affected villages to a disease-free area. Therefore, they focused on treating sleep-sick patients and constructing a sick bay for individual outbreaks. It was impossible to intern all the suffering in the camp, except for in Togo, as this would have caused resistance from the local population. Instead, the doctors focused on helping the scapegoats already abandoned by their community due to their symptoms. This strategy was successful, with seriously ill locals volunteering to join the camp along with their fathers, as mentioned in medical reports by the "camp doctors" of Cameroon.

The spread of sleeping sickness was also confirmed on a large scale outside Duala in 1909/1910, prompting the colonial doctors to consider setting up sick camps in the colony's

interior. In this regard, the staff physician stationed in Akonolinga, Dr. Freyer, emphasized the need to isolate as many sick people as possible in the camp.[267]

However, such a camp was not set up in Molundu, where sleeping sicknesses were found among the concession company (GSK) employees. On July 18, 1909, the staff physician, Dr. Geisler, reported that he had not yet constructed an "isolation ward" due to a lack of manpower. He also pointed out that finding a suitable site for the camp was tricky. Dr. Geisler said the main issue was procuring a sufficient water source.[268]

Dr. Geisler's attempt to find sleep-sick victims near Molundu encountered difficulties: he discovered that the locals were not welcoming when he arrived in a village on the GSK steamship in mid-October 1909 to give the residents a medical check-up. He reported about it as follows:

> As the steamer approached and docked, the natives, almost all armed with muzzle-loaders, including pistol rifles […], had lined up on the shore and only allowed me and a few unarmed steamer men to enter the land, but neither a soldier nor a boy carrying my shotgun. If I had wanted to go any further, it would probably have come to a fight in the eye. [...] An investigation of the natives was of course out of the question under these circumstances.[269]

Dr. Geisler was determined to identify cases of sleeping sickness among the local population in Cameroon despite facing resistance. As a result, an isolation camp was not established in Molundu. The colonial administration could not confirm the endemic spread of trypanosomiasis in the area and did not view the lack of a camp as a significant issue. The doctors in Molundu successfully sent GSK employees infected with sleeping sickness back to their home country, which was seen as a job well done. However, the government in other epidemic areas of Old Cameroon could no longer neglect their health policy obligations.

Old Cameroon: Akonolinga / Ajoshöhe camp

The Akonolinga camp, built within the colonial administration's facility there, began in July 1910 with the internment of the sleeping sickness. The number of sick inmates in the camp

increased steadily, with 12 new sick people accommodated since July, as reported by Dr. Freyer on August 1, 1910. Still, in the October 2, 1910, report, he stated that the average daily infected population in September 1910 was "90 heads."[270] For this reason, it had to be the build of a second mat house (20m long × 6m wide).[271]

Despite this expansion, the camp was still so small that Dr. Freyer soon felt obliged to move the camp "to a more suitable location."[272] However, the relocation of the camp was delayed because of the death of Dr. Freyer. It was not until May 5, 1912, that the construction of the new camp began in Ajoshöhe, a town up the Njong River from Akonolinga. According to the report of the medical officer Dr. Nägele on October 7, 1912, the sleeping sick previously interned in the Akonolinga camp were brought to Ajoshöhe at the beginning of June 1912.[273] According to Dr. Nägele, four "sick huts" are made of bush material, each with approximately a volume of four hundred cubic meters, and were intended to accommodate 40 sick people.[274] Furthermore, the new camp is mainly equipped with new sanitary facilities, on the mention of which Dr. Nägele emphasized:

> Sufficient access to light and air [to the infirmary huts (H.I.)] is ensured by four large window-like openings each, which can be fully or partially closed by flaps [...]. The entire facility is 250 m away from the floodplain of the Njong; it is located [...] on a hill that rises steeply from the floodplain; this has a relative height of 60 m [...] The immediate surroundings of the camp are free of the tsetse flies.[275]

The Ajoshöhe camp in German Cameroon was a unique facility that cared for patients with sleeping sickness, syphilis, and leprosy. Medical practitioners from Cameroon researched the relationship between leprosy and syphilis, and the camp offered a platform for treatment and scientific exploration of all three ailments.[276]

As for the "camp plan" in Ajoshöhe, however, the lepers were isolated entirely within the camp due to the medical findings at the time that leprosy was very contagious. Although the doctor at the sleeping sickness camp was also responsible for the medical examination and

treatment of the lepers, their “bush houses” were, as Dr. Nägele emphasized that it was built in their own “village-like complex,” with the intention that “the lepers should later be interned at a somewhat greater distance from the sleeping sick camp.”[277]

Second, within the camp, the spatial separation between the locals and the Germans throughout the camp was carried out on a “racist” abound. On January 1, 1913, Dr. Nägele said the “Doctor’s apartment” was built on a hill 1 km from the camp.[278] Except for the doctor’s office to be made by the beginning of April 1913, a residential building for the zoologists, a tourist house, and a place for the passing Europeans on this hill. The hill was named by the locals as the “European quarter” [*Europeanerviertel*] and by two AR bite houses or two examination and laboratory buildings from the indoor “storage area” spatially separated. It was only in the third quarter of 1913 that a connecting road between the two parts of the camp was completed.[279] While most of the buildings were built in the “European vinegar” from brick,[280] the local storage occupants were still used for bush houses, which had a lifespan of two years due to their low durability.[281]

By the end of 1913, the camp had to maintain 61 larger and smaller bush houses due to the rapid increase in camp inmates. The number of inmates and local camp workers was 800 at the end of March 1914.[282] Given the circumstances, the upkeep of the bush houses became increasingly complicated. On January 23, 1914, Dr. Falb, the senior physician, reported that on average, 2.5 new homes needed to be built every month. Unfortunately, this task could not always be completed satisfactorily due to the local wall's failure.[283] To address the issue, Dr. Falb drafted a “renovation plan for the camp.” However, this “renovation plan” by Dr. Falb was challenging to implement because structures that were only a year old needed thorough repair.[284] As a result, renovation work came to a standstill, and numerous inmates were homeless within

the camp. So, Dr. Falb corresponded to Dr. Nägele on the "welfare of the camp inmates," not the reality of the camp itself. This also applies to the case of the infected area in the Dume district. Because of the lack of a plan from the colonial administration concerning the camp facilities, numerous seriously ill people had to migrate from one camp to another.

Old Cameroon: Camp Dume / Mbidalong / Momendang (A) Camp Dume

The sleeping sickness outbreak in the Dume district was brought in by sick individuals from the French colony. District authorities took proactive measures to manage the spread by regulating border traffic and establishing a camp for affected individuals. The camp was closely monitored to prevent the influx of native people from French territory.[285] Station Dume built the camp as an extension of the station hospital in early 1911, and as of June 30, 1912, 66 sleep-sick people were isolated and treated in the camp.[286]

Besides the fact that numerous sleeping sick people, who probably came from the French Congo, were admitted for treatment in the hospital, this camp quickly lost its practical importance because an epidemic spread of the disease was confirmed on the German side. The camp from the largest epidemic area of Old Cameroon was far away on the Njong River. The assistant doctor stationed in Dume, Dr. Schömig, reported to the governor in Buea on January 1, 1913, that the sleeping sick victims in the infected area would need several days to go to Dume, but:

> On the way, they are exposed to various dangers as they are not accepted as sleeping sicknesses in any village. As a result, sick people have repeatedly perished on the way, including being killed by leopards, which [...] grow into a plague of the land.[287]

Dr. Schömig went on to say that transporting the sleeping sick to Dume also encountered difficulties because of the locals. He writes, "All refuse to carry sleeping sick; where the people were just willing to be examined and brought their sick people, they all ran away when they realized that they should now carry the sick people on."[288]

Due to the rapid increase in inmates, the Dume camp struggled with overcrowding and supervision of internees. The station hospital could not keep up with the expansion, causing neglect of welfare and isolation. Dr. Schömig reported that the hospitals housed an average of eight inmates despite being designed for a maximum of five sick individuals.

Towards the end of 1912, Dr. Schömig discovered patients with sleeping sickness and sent them to Dume. He also transferred them to the other camps at Ajoshöhe and Mbidalong. The auxiliary camp was erected in July 1912 and, in conjunction with the Momendang camp, completed in April 1913, took over the health care responsibilities of the previous station hospital in Dume. Finally, the Dume sleeping hospital was shut down in March 1913.[289]

Camp Mbidalong

The senior physician, Dr. Falb, faced a difficult situation with the hospitalized sleeping patients. Of the 107 patients referred from Mbidalong, 34 died in the third quarter of 1913. Dr. Falb writes that this showed "an extraordinarily high percentage [of 31.7%]."[290] Dr. Falb also reported on January 23, 1914, that in the fourth quarter of 1913, 57 of the 125 accesses transferred from Mbidalong (= 45.6%) had died.[291] The cause of this high mortality was undoubtedly the fact that the sick, not infrequently already in an advanced stage of the disease before the transport, had to march a few tens of kilometers and thereby decisively worsened their condition. Dr. Falb reported that, in addition to the 57 dead, eighteen other patients died from Mbidalong to Ajoshöhe in the fourth quarter of 1913.[292] If these deaths are included, the referred sick's mortality rate rises to 52.4% (75 deaths out of 143 sick people) during this period.

Camp Momendang

The second new camp was constructed in Momendang at the beginning of March 1913. In April of the same year, the people infected with sleeping sickness, who had already been isolated

in the Dume camp, were transferred to Momendang. The new Momendang camp was located on a hill between Betua and Tina, the main artery of regional traffic. It was about two to three hours from the camp to the worst infected area.[293] Therefore, the new camp was much more suitable for isolating sleeping sick patients. On July 8, 1912, construction began on a new camp on the upper Njong River near Mbidalong. As early as the end of 1912, the sleeping sick, who had been interned in the overcrowded camp in Dume, were transferred to Mbidalong.[294] According to the report of the medical officer, Dr. Schachtmeyer, in the second quarter of 1913, a total of 262. Of these, 86 were transferred to the new camp during the liquidation of the Dume camp.[295]

The doctors in Mbidalong reported that the camp had suffered from a shortage of space and workers since the beginning. Dr. Schachtmeyer complained on April 1, 1913, that the deforestation in the site allocated to the new camp resulted in a constant lack of assistants to help. This, in turn, had led to extreme gaps in the detailed internment plan and called for multi-storied housing.[296] 86 patients were sent to Mbidalong when the Dume camp was dissolved. In the July 13, 1913 report, Dr. Schachtmeyer emphasized that he was "overwhelmed," and in May 1913, he sent 50 patients further to the camp at Ajoshöhe.[297] During the third quarter of 1913, the camp doctors conducted investigations and critical trials, which determined 342 sleeping patients. However, 241 patients were transported from the Mbidalong camp to Ajoshöhe due to a lack of space.[298]

According to the medical reports, the Momendang camp had better infrastructure and personnel than the Mbidalong camp. On July 1, 1913, Dr. Schömig, who previously worked as an assistant doctor in the Dume camp and now managed the Momendang camp, reported that three Europeans, including himself and two paramedics, were stationed there permanently. The camp had two rows of sleeping huts, each with six rooms accommodating five sick people.

Additionally, they set up an open hut for camp inmates and an examination house with a pharmacy. Overall, the Momendang camp could house up to 60 sick people.[299] As in the other sick camps in Cameroon, syphilis and leprosy patients were interned in Momendang, but their isolation huts, according to Dr. Schömig, again because of the risk of infection with these diseases, 20 m and 90 m respectively from the hut train for sleeping patients.[300]

By opening this camp, the German colonial administration probably gained some trust from the locals in their disease control. Dr. Schömig in the report:

> People quickly got used to the new camp, which was significantly closer to the area [health policy (HI)] and its most [sleeping sickness (HI)] area than the previous camp in Dume. But there were also accesses from the surrounding area, soon also from the Ajong area, some even from the A-bong-Mbang-Akonolinga road.[301]

By the end of June 1913, the number of camp inmates had risen to 192, so more hospitals had to be built.[302] However, the fragility of the hospitals at Momendang was quickly exposed because "all the buildings were constructed using bush materials," just like in the Ajoshöhe camp.[303] In October 1913, the medical officer Dr. Schachtmeyer reported that the tree trunks in the hospital huts had been so severely damaged by termite damage or drill beetles that they would no longer be able to withstand the storms that often occur there. He said that cockroaches had eaten away the roof mats.[304] On December 31, 1913, Dr. Schachtmeyer reported that the insects had caused damage not only to the camp's living quarters but also to its service buildings. The storerooms and pharmacy houses were so badly damaged that a new house had to be built out of bush material. The lack of space for storing food and medicine had already become a problem.[305]

Momendang's huts were frequently damaged and had to be rebuilt within eight months of opening. The colonial doctor reported little on the matter, but repairs likely continued until the First World War. The harsh weather and termites made living conditions challenging, and

overcrowding meant that any uninhabitable huts left the sick homeless or forced to move to another overcrowded hut. The camp's priorities did not align with the doctors' claims of prioritizing the inmates' welfare.

New Cameroon: Camp Kumbe

The fight against sleeping sickness in newly acquired territory New Cameroon was delayed until the second half of 1913. The sleeping sickness camp was established in Kumbe, near Carnot, at the site of the old French post. Carnot is located at the northeasternmost point on the Sanga (Sangha) River, which is known to be endemic to trypanosomiasis.[306] According to the report of the medical officer, Dr. Rösener, an average of 70-100 sleeping sick were interned in the Kumbe camp in November and December 1913.[307]

Although the medical staff in Cameroon reported extremely inadequate information on this matter, an attempt is now being made to roughly calculate the total number of inmates in the camps located in Ajoshöhe, Mbidalong, Momendang and Kumbe. According to reports from the camp doctor, by the end of September, ten hospitals were built in Ajoshöhe that could accommodate around 400 patients in total, as per the available information.[308] According to the camp doctors stationed in Mbidalong, it can be said that an average of 200 to 250 sick people were constantly isolated there.[309] It was reported from the Momendang camp that up to 200 ill people had been separated at the end of June 1913, and the camp doctor there pointed out that this number of camp inmates would increase in the future.

By 1913, around 900 people with sleeping sickness were isolated in camps in Cameroon. Some patients escaped, but the German colonial administration successfully subjected many individuals to medical examinations despite inadequate structures. The doctors received no personal or financial support from outside the colony, and their working conditions worsened.

Let's explore how they managed to refer locals to the camps and provide food and medical treatment.

Sleeping Sickness Treatment Cameroon

Based on the evidence that up to 900 sleeping sick individuals were isolated in camps in Cameroon by the end of 1913, it is reasonable to assume that the German colonial administration was not capable of imposing such a policy on a large scale through force. As shown in the preceding sections, it was difficult for the German colonial administration to enforce policy within the colony's interior. To successfully intern those with sleeping sickness, the doctors needed cooperation or at least acceptance of the local population. However, medical reports indicate that the locals were mainly unsympathetic to the fight against sleeping sickness, as observed in Togo and German East Africa. The doctors became increasingly unpopular with the residents who resisted their examinations. In Cameroon, as with Togo, "travel doctors" identified the patients as interned, who were then supervised by local "medical assistants." However, before the arrival of the travel doctor, the locals would often engage in "passive" resistance, fleeing into the bush upon hearing drum signals warning them of the doctor's arrival. For instance, Dr. Schachtmeyer, stationed in Mbidalong, reported on April 1, 1913, that most residents had fled upon hearing of his impending arrival.[310]

Although the locals' resistance towards the German doctors hardly led to violence, they often reacted angrily to the cooperation of the "colored medical assistants and messengers."[311] Due to the lack of German doctors, the local employees employed by the German colonial administration sometimes had to go to the village communities without their accompaniment, from which they were supposed to transport the sleeping sick they had found to the camp. According to the report of the camp doctor, these local employees "had to endure abuse on the

part of the population."[312] Even if they asked the village residents to provide porters to transport the sick, according to this camp doctor, the locals would not comply. That is why "only trained Europeans" can overcome the difficulties of transporting the sleeping sickness.[313]

Even if the travel doctor could feed sleeping patients in the camp internally, he could hardly rest assured. Schachtmeyer reported on July 13, 1913, by a sleeping patient who had been sent to the Mbidalong camp but was subsequently "secretly kidnapped" by his relatives in a canoe.[314] Nägele, on April 10, 1913, the rumor had spread among the camp inmates that "the intestines of the dead would be sent to Germany and processed into tin beef." As a result, "quite a few sick people have disappeared from the camp."[315] Due to the lack of personnel, the camps in Cameroon could only be monitored to a limited extent.[316]

Issues with Treatment

On the other hand, the renouncement of the isolation of the less ill resulted in a drastic increase in the number of seriously ill-housed in the camp. While the locals, as already mentioned, behaved rather negatively towards the attempt of the colonial doctors to find those with minor illnesses who could still move well, the seriously ill, who showed apparent symptoms of disease and sometimes could no longer walk themselves because of their motor disorders, became, segregated, and neglected by the members of their village community. According to the doctors there, many Cameroonians still firmly believed that "the disease was transmitted through touch and sexual intercourse,"[317] even more so than in German East Africa and Togo. In this regard, the resident doctor stationed in Dume, Dr. Schömig, who treated the women there on an outpatient basis, had come to him again and again and asked him "whether they could marry without any danger to [sic.] their future partner."[318] According to his report, the fear of women infected with sleeping sickness has a lot to do with the following conditions:

> [In Dume] sick young girls, even if they are released from camp cured, do not get a husband, their husbands and vice versa abandon women.[319]

Even when it wasn't about getting married, the locals, like Dr. Nägele, reported in September 1912 that "sleeping sick people should be isolated more strictly than other sick people" and "avoiding coming into contact with them if possible."[320] It is, therefore, no wonder that the locals, as far as the severely sleeping sick are concerned, contributed to the colonizers' disease control by isolating them in the camp. In fact, in camps in Cameroon, the proportion of inmates who were brought into the center "voluntarily" by the locals was significant. For example, on April 10, 1913, Dr. Nägele reported about the sleeping sick who had been isolated in the Ajoshöhe camp in the first quarter of the same year. "All came voluntarily or were brought into the camp by relatives or the chiefs."[321] The assistant doctor at Camp Dume, Dr. Schömig, also noted how the internment of the sleeping sick took place. He writes, "All entries came voluntarily, many of them […] were sent by the villagers because they were sick."[322]

Despite the hostility from the locals, the fact that they almost exclusively supported the camp policy of the German colonial doctors when transporting the seriously ill meant that many patients had progressively worsening symptoms to the point that "long-term improvement is no longer expected."[323] Even under medical supervision, such sick people had no choice but to find death in solitude. In short, most of the sleeping sickness in Cameroon were isolated in the camp, but they had little chance of leaving the center alive.[324] Although the patients had little hope of recovery, the doctors in the camp did not want them to die peacefully. They continued to give them drugs containing arsenic. The diagnosis was often based only on external appearance since microscopic examination was considered too time-consuming and laborious for the camp doctors.[325]

In addition, the doctors tried different drugs on the patients. For example, according to

senior doctor Dr. Falb, only "to report" in addition to Atoxyl also Salvarsan and other various dyes, although "the usual cure can then only delay the end [of the inmates]."[326] From the medical officer's report, Dr. Nägele, it emerges that, in addition to Atoxyl, he used at least two other arsenic-like drugs, namely Trypasafrol and Salvarsan, to treat the internees. According to Dr. Nägele, the former drug had strong side effects (nausea, abdominal pain, vomiting, and diarrhea), but a visible improvement in health was "never achieved."[327] On the contrary, the condition of those treated in this way "watched" worsened, and a child of seven years of age died after being injected with Salvarsan.[328]

The atoxyl treatment was not harmless either. As in the other contaminated colonies, the camp doctors could not overcome the problem of side effects from atoxyl therapy. As far as can be confirmed from the medical reports, there were more than ten cases of blindness occurred in the Ajoshöhe/Akonolinga camp from September 1910 to June 1913, while in the camps in the Dume district between July 1912 and December 1913, eight sleeping sick patients reported to partially or wholly lost their vision after the Atoxyl injection.[329] The German colonial administration in Cameroon didn't assertively treat sleeping sickness patients. Doctors observed affected locals who could not move due to nervous system damage, leading to segregation and neglect of the community.

The colonial doctors took advantage of this fact and tried to pursue their scientific interests through a health policy of interning the seriously ill. They succeeded in "fishing in the murky." This brought about a dramatic increase in camp inmates but also caused a high death rate among internees. The possibility of healing the camp patients was ruled out from the start, but the camp doctors administered dangerous drugs containing arsenic to the inmates. The doctors never viewed the camp inmates as "objects of healing" but only used them to achieve

their scientific success.

Outpatient Treatment

In the face of this resistance from the local inhabitants, the physicians in Cameroon, like the physicians in German East Africa, took the view that the camp policy should not always be strictly enforced.1 Instead, doctors in Cameroon and German East Africa promoted the idea of locals voluntarily visiting travel doctors to receive outpatient treatment with Atoxyl. As a result, there has been a noteworthy rise in medical check-ups, with Dr. Schachtmeyer examining more than 6,000 individuals and sharing his observations in 1913.[330] In the first quarter of 1914, he performed medical examinations on more than 7,000 people and found more than 300 trypanosome carriers.[331]

As early as September 1913, he had agreed with the district manager there on a health policy that should avoid "special coercive measures against the local population."[332] According to Dr. Schachtmeyer, during this conversation, the current conditions in the district are not conducive to isolating all sleeping sick people in the camp without exception. Unlike Dr. Feldmann in German East Africa, who severely reprimanded the district manager of Urundi for not being allowed to camp, Dr. Schachtmeyer considered the district manager to be "justified" and emphasized that the situation had improved thanks to this compromise made by the district manager. "Not all, but more of the local population, come for injections than before so that the hope of further improvement should not be entirely unjustified."[333]

In New Cameroon, the increase in the number of residents examined by the travel doctor was caused by the doctors who preferred outpatient treatment of sleeping sickness. The medical officer, Dr. Rösener, reported in October 1913 that he had examined around 19,000 residents in the Kumbez camp alone between April and October 1913 and identified 2,141 sleeping sick

among them. He emphasized that isolating so many sick people would encounter the most significant difficulties because of the inadequate arsenal of the German side.[334]

According to Dr. Rösener, he initially withdrew from medical examinations out of fear of the Europeans, "When they saw that they wanted to help them in their misery, their courage grew, and they gained confidence and with every new examination of a village new people come so that now a large part of the population has seen the doctor."[335] He was also of the opinion that the residents there had, "first had to [...] gain trust in the European. And this could be achieved with patience and calm. Nothing would, therefore, have been more wrong than rounding up the sick with armed violence and isolating them in camps."[336] The fact that this medical officer thought that about the methods of fighting sleeping sickness, the situation in the other colonies, especially in "little Togo," should not be used for comparison. In his opinion, the affairs of Cameroon are entirely different from those of Togo:

> Because where there [Togo] Almost 100 sick [sic.], There are over 1,000 and more here. And finally, it is easier to isolate a few hundred sick people in a camp in an area that has been under peaceful administration for a long time than thousands of people whose land we have only recently taken into our administration, who, as I said, do not yet have any real confidence in my Europeans could grasp.[337]

He pointed out that in Togo, outpatient atoxyl treatment was viewed as inferior. "Was this remark initially only applied to East Africa," said Dr. Rösener, "but it also affects Cameroonian conditions simultaneously."[338] From these statements, it appears that Dr. Rösener showed more medical interest in the control measures of East Africa than in those of Togo. This is no wonder because, as already mentioned, at this point (early February 1914), the research trip of the chief medical officer, Dr. Kleine, had already been planned, and the Cameroonian colonial government was ready to let him instruct you on the best fighting methods for Cameroon.

But Dr. Rösener, At the same time, distanced himself from the German-East African method by claiming that outpatient treatment with Atoxyl should be promoted and that it should

even be given preference over fly control. In his opinion, preventing the disease from spreading to the north and west of New Cameroon is imperative, and outpatient therapy is the most significant benefit for this purpose.[339] Although Dr. Rösener hoped that the on-site treatment with Atoxyl could stop the further spread of the disease, this method encountered various difficulties. It could only be carried out to a limited extent, which was unavoidable given the inadequate administration. To be able to treat the sick who lived far away from the camp, the doctors would have had to travel regularly to epidemic areas. Still, the senior doctor stationed at Ajoshöhe, Dr. Falb, reported at the end of 1913 that such intensive travel was "currently not practicable due to the presence of only one doctor in the camp.[340]

In 1913, two sleeping sick people were released from the Mbidalong camp. Their condition had improved considerably after several double injections of Atoxyl.[341] They were, however, obliged to come to the camp on the next injection days.[342] The medical officer there, Dr. Schachtmeyer, took this measure in the hope that the introduction of the outpatient atoxyl treatment would lead to "some people voluntarily submitting to [the medical examinations] in the future, when they know that they will allowed to go back to their home village for a short time."[343] However, the doctors there soon found themselves disappointed that the two sleeping sick people did not see the doctors two weeks later. When the camp doctor, Dr. Hausch, had not heard from them for two months, he judged in the October 17, 1913, medical report that the attempt to "introduce outpatient treatment" had "initially failed."[344] In New Cameroon, the locals often gave the travel doctor who wanted to treat the sleeping sick on an outpatient basis a bad reception. On January 1, 1914, the government doctor stationed in Carnot, Dr. Koch.[345] The fear of the residents there "of the white man" dramatically interferes with a quick fight against sleeping sickness. But the doctors reacted very alarmingly to the sick people's flight from drug

treatment. In Carnot, according to Dr. Rösener, the double injection has not proven successful "because people tend to avoid the second after the first injection."

Therefore, the treatment is only "with one-off atoxyl doses."[346] Most likely, the patients treated with Atoxyl on an outpatient basis also suffered from the mentioned side effects after administering the arsenic-like drug without medical care. In addition, the doctors often administered the atoxyl to the residents of New Cameroon, in particular, without prior microscopic examinations. As early as February 1913, the senior physician, Dr. After his research trip to New Cameroon, Kuhn suggested treating the entire population with medication "regardless of whether the diagnosis was confirmed by microscopic findings" because, in heavily contaminated areas, such as Carnot, one had to assume that "all People are already [sleeping sickness (HI)] or will be short."[347]

This proposal was implemented immediately. In October 1913, Dr. Rösener reported that he had given all the residents of the villages he examined during outpatient treatment with atoxyl injections. "In many cases, finding trypanosome carriers among those treated during the repeated [microscopic] examination was no longer possible."[348] The government doctor in Carnot, Dr. Koch, reported in January 1914 that the atoxyl treatment was continued in the Carnot area "[to] limit the possibility of infection" and that "both the notorious trypanosome carriers and the only reasonable suspects were treated."[349] The doctors in New Cameroon justified this treatment method with the finding that Carnot was very severely affected by sleeping sickness, namely that the proportion of sick people rose to 24% in some localities, data that the German doctors did not have their research trip, but mostly borrowed from the studies of French doctors.[350]

The German doctors did not attempt to prove the scientific accuracy of the incidence rate data because they chose not to conduct a microscopic examination. This negligence in

identifying the sick, along with the introduction of a potentially harmful injection method, makes it likely that several locals in Cameroon were given high and possibly even fatal doses of Atoxyl without evidence confirming the presence of the trypanosomes.

Conclusion

When we compare the policies of Cameroon and German East Africa regarding camps, we can see that both initially attempted to isolate sick individuals without any seclusion. However, this method was soon found to be impractical. In Cameroon, sleeping sickness treatment was limited to outpatient "treatment wards" only for those in the early stages of the illness. In contrast, the measures adopted in East Africa were different. The colonial physicians emphasized deforestation of riverbanks and lakeshores to eradicate the tsetse fly and ultimately combat the disease. Although their goal was not achieved, they remained convinced that the disease could be eradicated.

The physicians in Togo believed that destroying the pathogens in the human body could potentially combat the disease. This assumption was shared by doctors in both colonies. However, the colonial administration in Cameroon was unable to implement any effective measure other than the inadequate internment of the sick. The local doctors had to accept that they could only provide therapy of questionable value without any further action. In Cameroon, sick individuals were initially isolated, but later, outpatient treatment stations were used for sleeping sickness. Unlike in German East Africa, no alternative measures were taken to combat the disease. Colonial doctors in East Africa focused on deforestation to eliminate the tsetse fly, but their efforts were unsuccessful. Doctors in Cameroon had limited resources and could only quarantine the sick to combat a disease. Outpatient treatment was the primary option, sometimes overseen by a European member of the camp.[351]

Disease control in Cameroon no longer had a tangible goal. The government doctor in Carnot, Dr. Koch, said that the outpatient treatment of the sleeping sick would prevent the further spread of trypanosomiasis.[352] Despite feeling better after atoxyl injection, patients often left their village and disappeared, mistakenly thinking that further injections were unnecessary. This suggests that the measures taken in Cameroon to control the spread of sleeping sickness were ineffective in preventing patients from repeatedly fleeing. Consequently, an elderly inmate at Kumbe camp filed a complaint with the camp doctor about the isolation policy implemented by the colonial administration. This complaint sheds light on the healthcare policy in the region as perceived by the local population. He is quoted as saying, "What do you want from us? Don't bother us; we'd rather die."[353]

However, the doctors could not or did not want to perceive this crucial aspect of disease control. Instead, the medical officer, Dr. Rösener, expressed his lack of understanding of the local woman's statement.

> Yes, especially the old people, men, and women, from whom one should naturally best still assume understanding, are the most incomprehensible [...] In every village, there are also dissatisfied [...] who [...] get through seeking to cause difficulties for Europeans when being thick-skinned.[354]

Dr. Rösener made every effort to avoid attributing the ineffectiveness of disease control measures to the control method itself. Instead, he blamed the negative attitude of the locals. This blaming of the locals was a common tactic used by German colonial officials and tropical doctors to assign responsibility for their failures in colonial politics. The doctors and other colonial officials claimed that the lack of understanding on the part of the locals was the root cause of the failure of colonial policies. However, the arbitrary nature of German colonial rule was no longer called into question by the outbreak of the First World War.

Chapter 5: Epilogue

When examining the relevance of the German colonial experience in Africa to the present day, it is important to keep in mind certain limitations. One such limitation is that the German colonial empire only endured for 34 years, which restricts the long-term impact of colonialism on its African colonies, Imperial Germany, and the broader European colonial experience. Another limitation is that the German colonial empire lacked a centralized and professional bureaucracy until just before World War I, which impaired the consistent effectiveness of utilizing colonial force in the German colonies.

Once the centralization and modernization process began in the German African colonies with structural changes to the organization of the bureaucracy, personal changes, and the reliance on more technical specialists, the German colonies experienced a public health crisis with the sleeping sickness epidemic, which gave tropical doctors a unique ability to act with colonial authority, propose reform, and attempt to guide colonial power within these two overlapping events.

The descriptions of the activities of the tropical doctors show that they could not be as active and proactive in implementing health measures as has been assumed in previous research, especially in the medical histories brought forward by Ford, Weber, and Lyons. On the contrary, they always had to plan and execute the necessary measures considering all political circumstances. Not infrequently, they also had to make compromises with the other power organizations, such as the regional colonial administration or with local leaders, and many times, both made up and implemented policies ad hoc.

Often, they conflicted not only with the natives but also with the German colonial authorities. It was precisely these African or German rulers who cooperated to implement the

medical measures smoothly. This strongly interwoven colonial political structure cannot be attributed to the simple dichotomy between German "conquerors" and the African "subjects."

It is essential to focus on tropical doctors as a conduit for the centralizing force of colonial authority and power that propelled the modernizing process in colonial Africa. A unique set of contexts created that conduit, such as the necessity of their circumstances during the sleeping sickness epidemic, the tropical doctors' unique training, and their position within the German colonial structure. Tropical doctors displayed their colonial power through the recommendations and implementations of policies such as building, planning, and organizing quarantine camps, human medical experimentation, and ultimately segregating the white German colonists and the African workforce that supported the modernizing project.

These policies emphasized controlling the African population's movement internally and externally in the German African colonies, controlling and changing the local environments to combat sleeping sickness and local colonial power more effectively. The tropical doctors' actions produced a proof of concept for the new German colonial paradigm. However, the development of the paradigm into long-term changes never fully materialized due to the First World War, and French and British colonial projects took over that process.

The success of these policies was ultimately mixed and limited; beyond the horrors of what was essentially human experimentation in a colonial open-air laboratory, the treatments used did not permanently destroy the trypanosomes consistently without causing permanent side effects. The camps were constantly under guarded and could never house the requested number of local populations to contain the disease effectively, and the destruction of tsetse fly bushes limited the spread of the transmission but could not effectively curb the outbreak as the reach needed effectively apply these policies was beyond the power of the German colonies and the tropical

doctors.

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[1] Schnee's work was not an academic one, but the intent of the German colonial encyclopedia was reactionary to the treaty of Versailles and Henrich Schnee, *Deutsches Kolonial-Lexikon,* (Leipzig: Quelle & Meyer,) 1920.

[2] Townsend wrote two works on the subject. Her dissertation in 1921 Mary Evelyn Townsend, *Origins of Modern German Colonialism 1871-1885*, (New York: the University of Columbia Press), 1921 and the first comprehensive overview of the German colonial empire nine years later Mary Evelyn Townsend *The Rise and Fall of the German Colonial Empire, 1884-1918,* (New York: University of Colombia Press), 1930. She was also most likely influenced by Henrich Schnee's lectures that he gave during the interwar period in Europe and America, but I could not prove this supposition.

[3] A German scholar that adopted this approach was Hans Spellmeyer, *Deutsche Kolonialpolitik im Reichstag,* (Stuttgart: W. Kohlhammer), 1931.

[4] Eckart Kehr was a Marxist German historian who was the first to emphasize social structures and economic interests in influencing political decisions instead of heroic personalities. His work *Schlachtflottenbau und Parteipolitik 1894-1901: Versuch eines Querschnitts durch die innenpolitischen, sozialen und ideologischen Voraussetzungen des deutschen Imperialismus* was the basis for the creation of the Bielefeld school and the methdological foundation of Hans-Ulrich Wehler's social imperialism thesis and Fritz Fischer's *Sonderweg* thesis.

[5] Fritz Fischer, *Griff nach der Weltmacht: die Kriegszielpolitik des Kaiserlichen Deutschland, 1914-18*, (Dusseldorf: Dorste), 1961.

[6] The concept of *Sonderweg*, which translates to "special path" or "unique path," is used in German historiography to describe the idea that Germany's historical development followed a unique and separate path from other European countries. According to this concept, Germany's development was characterized by a series of distinctive features, including its late unification, authoritarian political culture, and problematic relationship with modernity. The term was first used in the early 20th century by historians who sought to explain Germany's rapid

rise to power and subsequent descent into totalitarianism and fascism. They argued that Germany's historical trajectory was distinct from that of other European nations due to a combination of factors, including its geographic location, its fragmented political structure, and the legacy of the Holy Roman Empire. Proponents of the *Sonderweg* thesis argue that Germany's unique historical development created the conditions that ultimately led to the rise of the Nazi regime and the atrocities of World War II. On the other hand, critics argue that the Sonderweg thesis is simplistic and reductionist and fails to account for the complex interplay of factors that shaped Germany's history. In recent years, the concept of Sonderweg has come under increasing scrutiny, with many historians arguing that it is no longer a useful or accurate way of understanding Germany's history. Instead, they advocate for a more nuanced approach that considers the multiple forces that shaped Germany's past and continue to shape its present.

[7] Hans-Ulrich Wehler laid this thesis out specifically in Hans-Ulrich Wehler, *Bismarck und der Imperialismus* (Cologne: Kiepenheuer &Witsch), 1969. Wehler argued German colonialism was a form of social imperialism. To the point, Wehler traced his argument by stipulating that colonialism provided Germany with more resources for expansion and proved the worth of Bismarck's rule system. Wehler argued that Germany's upper social classes used Germany's colonial empire to win over oppositional groups, namely the SPD and their working-class support in the Reichstag. Thus, the driving force of Kolonialreich's continued existence and German colonialism derived from the Prussian aristocracy from which Bismarck came. Wehler used colonial policy and ideas of colonialism to discuss Wilhelmine German society's social conflicts and the structural problems of the Kaiserreich, not the German colonial empire or German colonialism themselves.

[8] It is important to note that there are differing historiographical lenses to the *Sonderweg* thesis outside the initial framework by Fischer and Wehler and the "social imperialism" interpretation. There is a branch of cultural/ideological historiography that the distorted and incomplete embrace of the enlightenment by some German intellectuals, followed by their despair over an increasingly dissolving traditional world, led to a continuing rejection of liberal-democratic values and traditions on the one hand.

[9] See Susanne Kuss, *German Colonial Wars and the Context of Military Violenc*e (Cambridge: Harvard University Press), 2017 frame against Isabel Hull, *Absolute Destruction: Military Culture and the Practices of War in Imperial Germany*, (Ithaca: Cornell University Press), 2013.

[10] Namely his work Woodruff D. Smith, *The German Colonial Empire*, (Chapel Hill: University of North Carolina Press), 1978.

[11] Woodruff D. Smith, *The Ideological Origins of Nazi Imperialism,* (Oxford: Oxford University Press, 1986).

[12] Francesca Schinzinger was a German historian born in 1931 and died in 1995. She was a leading expert on the history of German colonialism and the German Empire, and her research focused on colonial rule's political, economic, and social implications. Schinzinger was born in Hamburg, Germany, and studied history and political science at the University of Hamburg and Freiburg. She began her academic career as a research assistant at the University of Freiburg. She later worked as a lecturer and professor at several universities in Germany and the United States. Schinzinger's research focused on German colonialism's political, economic, and social implications. She was particularly interested in how the colonial rule was used to further the goals of state-building and national unity and in the impact of colonial rule on the development of the German state. She also explored the ongoing impact of German colonialism on contemporary politics and society. Schinzinger was a prolific scholar who published numerous books and articles on the history of German colonialism and the German Empire. Some of her key works include "German Colonialism and National Identity" (1988), "German Colonialism Revisited" (1991), and "The Political Economy of German Colonialism" (1994). She was also a member of several professional organizations and served as the editor of several academic journals. Francesca Schinzinger was a leading historian of German colonialism and the German Empire, and her research continues to be highly regarded and influential in the field.

[13] The new realm of cultural history brought with it three notable trends in the historiography of German colonialism. The first trend looked at discourses and the questions of representation. Scholars of German colonialism attempted reconstructing rhetorical and discursive patterns that structured the colonial project. They attempted this reconstruction through ethnographic studies, colonial patterns in popular culture and literature, and the language used by policymakers. The second strand focused on producing colonial knowledge generated in the territories and the colonial populace. Scholars focused on how knowledge formed through the sciences such as anthropology and medicine and how they played a crucial role in the acquisition and conquest of colonial territories. In these studies, they use the method and theory of Foucault to show knowledge as an inherent part of colonial power structures. The third trend that cultural history brought to the historiography of German colonialism focused on memory and remembrance.

[14] The historiography of German tropical medicine can be traced back to the late 19th and early 20th

centuries when German colonial expansion in Africa led to increased interest in studying and treating tropical diseases. This period established several institutions and organizations dedicated to tropical medicine, including the Colonial Health Office in Berlin and the Sleeping Sickness Commission in 1906. During this time, German tropical doctors were instrumental in developing new treatment methods and researching tropical diseases. However, their focus on individualized medical treatment and applying Western scientific methods often failed to address the underlying social and economic factors contributing to spreading diseases like sleeping sickness.

[15] Eckart's monograph *Medizin und Kolonialimperialismus: Deutschland, 1884-1945* provided the most extensive contribution to the historiography of German colonialism and medicine by examining the complex web of tropical doctors and tropical medicine within the German colonial empire. Eckart argued that the politics of colonial domination enmeshed with German physicians. Physicians went on infectious disease campaigns and expeditions, accompanied by troops or police, to find and quarantine those suspected of being carriers of the disease. The German colonial empire recruited them for colonial wars as officers they helped treat wounded German soldiers and attempted to keep outbreaks of contagious disease among prisoners of war from being passed on to the white European and German population. Eckart's method used archival sources such as official medical and administrative reports sources to examine the epidemiology and health-care providers in each of the German colonies. He used his method to analyze the attitudes of colonial medical officers and medical missionaries towards their work. Eckart's significance is that his work established the methodological foundation for examining the relationship between German colonialism, medicine, doctors and physicians.

[16] Now, the modern-day country of Namibia.

[17] Namely her work of *Medizin und Herrschaft: Malriabekämpfung in Kamerun, Ostafrika und Ostfriesland (1890-1919)* is one of most recent examples of additions to the historiography of German colonialism and studying the relationship between medicine and colonialism.

[18] Their respective works are listed below. John Ford, *The Role of the Trypanosomiases in African Ecology: A Study of the Tsetse Fly Problem*, (Cambridge: Cambridge University Press,) 1971. Maryinez Lyons, *The Colonial Disease: A Social History of Sleeping Sickness in Northern Zaire, 1900-1940*, (Cambridge: Cambridge University Press,) 1992. Mari Webel, The Politics of Disease Control: Sleeping Sickness in Eastern Africa, 1890 -1920, (Ohio: Ohio University Press,) 2019.

[19] Namely her work *Networks in Tropical Medicine: Internationalism, Colonialism and the Rise of a Medical Specialty, 1890-1930* (Stanford: Stanford University Press), 2011.

[20] Deutsche Kolonialgesellschaft. *Zeitschrift für Kolonialpolitik, Kolonialrecht und Kolonialwirtschaf*t (Berlin: Wilhelm Süsserott, 1907), 15–16.

[21] Woodruff D. Smith, *The German Colonial Empire* (Chapel Hill: University of North Carolina Press), 192.

[22] Woodruff D. Smith, *The Ideological Origins of Nazi Imperialism* (New York: Oxford University Press 1986) ,124-129.

[23] "Colonial Secretary Dernburg Defines Reforming Colonialization," in *The German colonial experience: select documents on German rule in Africa, China, and the Pacific 1884-1914* (Lanham: University Press of America, 2010), 111.

[24] Prince Bernhard von Bülow, *Memoirs,* 2: 292-93.

[25] Werner Schieffel, *Bernhard Dernburg 1865 - 1937: Kolonialpolitiker und Bankier im Wilhelminischen Deutschland* (Atlantis Verlag: Freiburg, 1974), 11–37.

[26] Smith, *The German Colonial Empire*, 214.

[27] Bernhard Dernburg, *Koloniale Lehrjahre,* (Stuttgart: Union Deutsche Verlagsgesellschaft, 1907), 14–16.

[28] Spidle, "The German Colonial Service," 136–37.

[29] Smith, *The German Colonial Empire*, 215.

[30] Smith, "Colonialism and Colonial Empire," in *Imperial Germany: A Historiographical Companion* (Westport: Greenwood Press, 1996), 446.

[31] Smith, "Colonialism and Colonial Empire," 446.

[32] Smith, "Colonialism and Colonial Empire," 447.

[33] The foundation of tropical medicine dates roughly to Sir Patrick Manson's publication of *Tropical Diseases* in 1898 and the establishment of the London and Liverpool Schools of Tropical Medicine in 1899. The same period saw the foundation of schools of tropical medicine/hygiene in Hamburg (1901), Lisbon (1902), Paris (1902), and Brussels (1906).

[34] Neill, *Networks of Tropical Medicine,* 5-6.

[35] David Arnold, *Imperial Medicine, and Indigenous Societies*, (Manchester: Manchester University Press, 1988), 3.

[36] Neill, *Networks of Tropical Medicine,* 7.

[37] Claus Schilling, "Welche Bedeutung haben die neuen Fortschritte der Tropenhygenie für Unsere Kolonien," 163.

[38] Currently the *Bernhard-Nocht Institut für Tropenmedizin* [Bernhard Nocht Institute for Tropical Medicine]

[39] L.H. Gann and Peter Duigan, *The Rulers of German Africa, 1884 – 1914* (Stanford: Stanford University Press, 1977), 180.

[40] Neill, *Networks of Tropical Medicine*, 64.

[41] Neill, *Networks of Tropical Medicine*, 48.

[42] Wolfgang Uwe Eckart, *Medizin und Kolonialimperialismus Deutschland, 1884-1945 (*Paderborn: Schöningh, 1997), 25.

[43] Gann and Duignan, *The Rulers of German Africa, 1884 – 1914*, 56.

[44] Arthur J. Knoll and Hermann J. Hiery, eds., *The German colonial experience: select documents on German rule in Africa, China, and the Pacific 1884-1914* (Lanham: University Press of America, 2010), 268.

[45] Neil, *Networks of Tropical Medicine*, 71-72.

[46] http://www.who.int/neglected_diseases/diseases/en. (accessed November 11, 2018).

[47] "CDC - African Trypanosomiasis - Disease," April 28, 2020, https://www.cdc.gov/parasites/sleepingsickness/disease.html.

[48] John Ford, *The role of Trypanosomiases in African ecology: A study of the tsetse fly problem,* (Cambridge: Cambridge University Press, 1971), 66-70, 138-140, 471-477.

[49] "Atoxyl" is the 19th century name given to the inorganic compound Arsanilic acid. For more information on Atoxyl use for treating syphilis see: E. T. Burke, "THE ARSENO-THERAPY OF SYPHILIS; STOVARSOL, AND TRYPARSAMIDE," *British Journal of Venereal Diseases* 1, no. 4 (October 1925): 321–38.

[50] Eckart, *Medizin und Kolonialimperialismus*, 320.

[51] Quote from Feldmann's report to the chief medical officer of the Schutztruppe in Dar es Salaam in BArch R 1001/5895, 8.

[52] BArch R 1001/5895, 8.

[53] "First Lieutenant Baumstark's Report on the Border, from August 3 to 13," August 18, 1903, BArch R 1001/5895, 12. Given the increased risk of the plague being introduced, it was already demanded in Berlin in 1903 that Germany, following the example of England and Portugal, should send out a unique expedition to research sleeping sickness.

[54] BArch R 1001/5889, 7.

[55] Staff Doctor Lott's report on Sleeping Sickness in Udemi, September 13, 1903. BArch R 1001/5895, 14

[56] Senior physician Feldmann's Report on Sleeping Sickness in the Bukoba District. December 28, 1903. BArch R 1001/5895, 36.

[57] President of the Köhler's report concerning research on Sleeping Sickness to the Secretary of State of the Interior. BArch R1001/5889, 15.

[58] BArch R 1001/5889, 18.

[59] Senior Physician Feldmann's Report on Trypanosomiasis and Glossina Palpalis to the Station Doctor, December 22, 1904. BArch R 1001/5895, 76-79.

[60] BArch R 1001/5889, 32

[61] Eckart, 340.

[62] Record of the meeting held on February 14, 1906, in the office building of the Imperial Health Office, concerning the expedition on behalf of the Reich to investigate sleeping sickness. BArch R1001/5889, 60.

[63] BArch R 1001/5889, 60.

[64] BArch R 1001/5895, 100.

[65] Robert Koch's Report about the sleeping sickness expedition during the stay in Amani. BArch R 1001/5895, 113.

[66] Ibid, 115.

[67] BArch R 1001 / 5895, 111.

[68] BArch R 1001/5895, 112.

[69] BArch R 1001/5895, 123.

[70] BArch R 1001/5895, 134.

[71] R 1001/5896, 19.

[72] BArch R 1001/5896, 20.

[73] His term of office was from 1896-1901, and he was Co-founder of the German colonial society and the

All-German Association. Later the chairman of the *Reichsverband* and, since 1929, a member of the NSDAP. Stöcker, *Drag Nach Afrika*, 96.

[74] BArch R 1001/5896, 44.

[75] Gründer, *Geschichte der deutschen Kolonien*, 155.

[76] BArch R 1001/5896, 45-47.

[77] BArch R 1001/5896, 46.

[78] BArch R 1001/5896, 46.

[79] BArch R 1001/5896, 47.

[80] Report on the research trip undertaken by Neubert from February to March 1906. BArch R 1001/5896, 155-166. Europeans already knew that British Uganda and the Congo Free State were infected with trypanosomiasis. See Maryinez Lyons, "Sleeping Sickness Epidemics and Public Health in the Belgian Congo," in Arnold, David (ed.), *Imperial Medicine and Indigenous Societies,* Manchester: Manchester University Press, 1988.

[81] BArch R 1001/5896, 87.

[82] Eckart, *Medizin und Kolonialimperialismus*, 346

[83] BArch R 1001/5896, 30.

[84] Eckart, *Medizin und Kolonialimperialismus*, 334.

[85] Gründer, *Geschichte der deutschen Kolonien*, 163. The concerns Dernburg expressed at the Reich Health Office meeting on November 18, 1907, against the measures taken to combat sleeping sickness. BArch R 1001/5896, 89. Dernburg thought "That the powers available to [the colonial administration] are not unlimited." BArch R 1001/5896, 89.

[86] BArch R 1001/5896, 21, 42.

[87] BArch R 1001/5895, 159-166.

[88] BArch R 1001/5896, 88.

[89] Barch 1001/5896, 19.

[90] The Imperial Colonial Office analyzed that the people of the Bugabu Sultanate were very reluctant to go to the Kisiba camp because, apart from the geographical distance, "the two tribes [Kisiba and Bugabu (H.I.)] are not very friendly to each other." BArch R l00l/5896, 55-56.

[91] Barch R 1001/5897, 177.

[92] BArch R 1001/5897, 6.

[93] BArch R 1001/5897, 65. Feldmann reported that Robert Koch also agreed to this choice of the location of the hospital.

[94] BArch R 1001/5897, 67. The camp policy on the eastern coast of the lake also seemed to gain the local population's trust.

[95] BArch R 1001/5897, 106.

[96] BArch R 1001/5897, 107.

[97] BArch R 1001/5897, 107.

[98] Ibid.

[99] Ibid.

[100] BArch R 1001/5897, 108.

[101] BArch R 1001/5897, 174.

[102] BArch R 1001/5898, 111.

[103] BArch R 1001/5898, 111.

[104] BArch R 1001/5897, 68. BArch R 1001/5901, 34.

[105] BArch R 1001/5900, 72.

[106] BArch R 1001/5900, 18.

[107] BArch R 1001/5897, 187. A medical sergeant was assigned to the expedition as auxiliary personnel.

[108] BArch R 1001/5897, 128.

[109] BArch R 1001/5897, 129.

[110] BArch R 1001/5897, 129.

[111] BArch R 1001/5897, 129.

[112] BArch R 1001/5898, 116

[113] Quoted from: BArch R l00l/5899, 58.

[114] BArch R 1001/5898, 119.

[115] BArch R 1001/5895, 141.

[116] BArch R 1001/5898, 73.

[117] BArch R 1001/5898, 73.

[118] BArch R 1001/5898, 73. BArch R 1001/5899, 200.
[119] BArch R 1001/5900, 59.
[120] BArch R 1001/5900, 237.
[121] BArch R 1001/5903, 13.
[122] BArch R 1001/5904, 39.
[123] BArch R 1001/5900, 190.
[124] BArch R 1001/5898, 73.
[125] BArch R 1001/5903, 164.
[126] BArch R 1001/5906, 73.
[127] BArch R 1001/5900, 190.
[128] BArch R 1001/5901, 59.
[129] BArch R 1001/5902, 32.
[130] BArch R 1001/5903,15.
[131] BArch R 1001/5906, 80.
[132] BArch R 1001/5918, 134.
[133] Ibid, 133-139, 144-147, 171-175.
[134] Ibid, 144.
[135] BArch R 1001/5918, 173-175.
[136] BArch R 1001/5922, 20. Eckart, *Medizin und Kolonialimperialismus*, 164.
[137] The following archival sources cover the travel doctors' reports in the various areas of Togo in more detail. BArch R 1001/5918, 211-216, 244-246. R1001/5919, 31-44, 95-99, 112-127, 209-217, 269-286. R1001/5920, 251-269, 45-68. R1001/5921, 92-95,1 02-105, 213, 220-229, 242, 260-269.
[138] Eckart, *Medizin und Kolonialimperialismus,* 120.
[139] BArch R 1001/5921, 92.
[140] BArch R 1001/5921, 103.
[141] BArch R 1001/5921, 220.
[142] Unnumbered documents by Dr. van den Hellen under the title. "About the activity of the Sleeping Disease Commission in Togo from April 1 to June 20, 1913." BArch R 1001 / 5922.
[143] BArch R 1001 / 5919, 95.
[144] BArch R1001 / 5919, 33. Although glandular swelling was found, the trypanosome was not always detected in the glandular fluid. Zupitza spoke of "glandular swelling without trypanosomes" in his report. BArch R1001 / 5922, 23.
[145] BArch R 1001/5919, 33.
[146] BArch R 1001/5919, 209.
[147] BArch R 1001/5919, 33f.
[148] BArch R 1001/5918, 134f.
[149] BArch R 1001/5918, 144-147
[150] BArch R 1001/5919, 34 and 115.
[151] BArch R 1001/5919, 211.
[152] BArch R 1001/5919, 116
[153] BArch Rl00l/5919, 30. Dr. Zupitza questioned this behavior of the inhabitants of the Misahöhe district as follows, "If the natives of the Misahohe district [...] were satisfied with the fact that the sleeping patients, who were certainly asleep, were sent to the Klouto camp for treatment, why were they not satisfied with the fact that those suffering from severe neck drippings were treated in the same way." However, this statement by Zupitza was not true everywhere. In the district of Mangu or Palime, for example, it was reported that the traveling doctor had encountered only a few seriously ill people because, in Zupitza's opinion, "the rather highly developed death cult" of the natives was responsible for the fact that they were anxious to die at home. BArch R l00l/5920, 20-30.
[154] R1001/5919, 36. During the transport of the sick, they were accompanied and monitored by the local police troops.
[155] BArch R 1001/5920, 60.
[156] BArch R 1001/5922, 47.
[157] BArch R 1001/5920, 254. BArch R 1001/5919, 270. BArch R 1001/5922, 46.
[158] BArch R 1001/5922, 45.
[159] BArch R 1001/5922, 45.
[160] BArch R 1001/5919, 34.
[161] BArch R 1001/5919, 34.

[162] BArch R 1001/5919, 34.
[163] BArch R 1001/5921, 5-6.
[164] BArch R 1001/5918, 212.
[165] BArch R 1001/5919, 32.
[166] BArch R 1001/5919, 33. BArch R 1001/5921, 34.
[167] BArch R 1001/5921, 4. BArch R 1001/5922, 34-50. To "resistance of the fetishist" also compare in Metzger, *Unsere Alte Kolonie Togo*, 80.
[168] BArch R 1001/5919, 35.
[169] Eckart, *Medizin und Kolonialimperialismus*, 163.
[170] BArch R 1001/5918, 134.
[171] Eckart, *Medizin und Kolonialimperialismus,*163. BArch R 1001/5918, 162. According to the report of the government doctor Dr. van den Hellen, the last patient sent to the Hausberg in January 1914, died there in April. In addition. BArch R 1001/5918, 139.
[172] BArch R 1001/5918, 134-139.
[173] BArch R 1001/5918, 137. According to Koch's reports, no trypanosomes were found after a single atoxyl injection of 0.5 g for four days, and even longer after two injections.
[174] BArch R 1001/5918, 137.
[175] During van den Hellen's research trip in the Misahöhe district, two children were sent to the camp in April 1908, three adults in May, 38 in July and 13 in July / August. See: BArch R1001 / 5918, 133-137, 144, 173. From Eckart's statement that after the confirmation of a sleeping patient in April 1908 the trypanosomes had been found in the blood of 80 other locals, however, the probability emerges that several inmates in the Hausberg camp had undergone the treatments in 1908. Eckart, *Medizin und Kolonialimperialismus*, 164.
[176] Metzger, *Unsere Alte Kolonie Togo*, 79.
[177] Regarding the relapses of sleeping sickness during atoxyl treatment, compare the report by Dr. von Raven. BArch R1001 / 5919, 82.
[178] BArch R 1001/5922, 20.
[179] BArch R 1001/5922, 21.
[180] Metzger, *Unsere Alte Kolonie Togo*, 80. Also in: Eckart, *Medizin und Kolonialimperialismus*, 167.
[181] Metzger, *Unsere Alte Kolonie Togo,* 80. BArch R 1001/5919, 52, 82. According to the report of the camp doctor, Dr. von Raven, with the expansion of the camp in the second quarter of 1909, when the 24 huts were rebuilt, it was only possible to accommodate only two people in each room, namely a sick person and a companion. In this further construction, two large cooking huts were set up, each containing 30 fireplaces, which made it possible to cook outside of the living rooms in rainy weather. BArch R 1001/5919, 82.
[182] Metzger, Unsere *Alte Kolonie Togo*, 80. Eckart, *Medizin und Kolonialimperialismus*, 167.
[183] BArch R 1001/5919, 55.
[184] BArch R 1001/5919, 55. This required 1,174 M.
[185] BArch R 1001/5919, 56. Other than advice given by Eckart, Governor Zech explicitly admitted when drawing up the budget registrations for the 1910 accounting year to the Reich Colonial Office in 1910 that the handing over of small gifts could be described as a "reward" for obedience to the camp doctor. In addition to gifts to the inmates.
[186] Eckart, *Medizin und Kolonialimperialismu*s, 167.
[187] BArch R 1001/5919, 56. Eckart, *Medizin und Kolonialimperialismus*, 167. Metzger, *Unsere Alte Kolonie*, 81.
[188] BArch R 1001/5919, 56.
[189] BArch R 1001/5919, 57. The sum of the food allowance of 0.20M per day does not seem to have been enough to compensate for unemployment, however, because the average daily wage of the local Togolese employed by Europeans was around 0.75M during the German colonial era was even at a lower level than in neighboring colonies. Also in Arthur Knoll, *Togo under Imperial Germany,* 86.
[190] In the second quarter of 1909, five workers were hired for this purpose. BArch R 1001/5919, 51, 82.
[191] For the difference of opinion between Governor Brückner and the Commission's travel doctors regarding the compulsory measures on sleeping sickness, see page 21.
[192] BArch R 1001/5919, 4f.
[193] BArch R 1001/5919, 83.
[194] Erbar, Ralph, *Ein "Platz an der Sonne?" Due Verwaltung und Wirtschaftsgeschichte der deutschen Kolonie Togo, 1884-1914* (Stuttgart: Franz Steiner Verlag ,1991), 28. Gründer, *Geschichte der deutschen Kolonien*, 135.

[195] BArch R 1001/5919, 82.

[196] BArch R 1001/5919, 82.

[197] According to Dr. von Raven, the other agents, as well as Auripigment or Collargol had even failed to make the trypanosomes disappear from the blood and were to be excluded as treatment agents. BArch R l00l/5919, 97.

[198] BArch R 1001/5919, 83.

[199] BArch R 1001/5919, 40.

[200] BArch R 1001/5919, 41.

[201] From the report on the activities of the camp physician for the period from January 1 to March 31, 1910, we learn that of the six inmates who died during this period, four were treated with more than two different drugs (arsenophenylglycine, atoxyl, auripigment, and collargol, etc.). However, it is unclear whether the deaths were directly attributable to this medicament therapy. BArch Rl00l/5919, 115.

[202] BArch R 1001/5919, 98.

[203] In addition to these disturbances of the internal organs, those affected by intoxication sometimes complained of unusual manifestations of the muscles and skin. In such cases, swelling of the whole body, edema, and a resulting skin rash, etc. were observed. BArch R l00l/5919, 98.

[204] The dose for the double injection varied between 0.4 g x 2 times and 1.0 g x 2 times because of the different body condition of the respective patients. BArch R l00l/5919, 98.

[205] BArch R 1001/5919, 98.

[206] BArch R 1001/5919, 213.

[207] BArch R 1001/5919, 213.

[208] BArch R 1001/5919, 213.

[209] BArch R 1001/5919, 213.

[210] BArch R 1001/5919, 109.

[211] BArch R 1001/5919, 148. The Togo governor's request was sent by telegraph to the Imperial colonial office on November 8, 1910. On the same day, the report prepared by the camp physician, Dr. von. Raven, had been submitted in advance to the colonial government in Lome, informing the government of the healing success of the use of arsenophenylglycine and prompting the governor to immediately send the telegram mentioned above. R1001/5919, 148.

[212] BArch R 1001/5919, 149.

[213] BArch R 1001/5919, 149.

[214] BArch R 1001/5919, 149.

[215] BArch R 1001/5919, 250. On institutionalizing "tropical medical research" in Germany, see Eckart, *Medizin und Kolonialimperialismus*, 73-90. Mannweiler, Erich, *Geschichte des Instituts für Schiffs und Tropenkrankheiten in Hamburg: 1900-1945* (Hamburg: Goecke & Evers), 1998. The fact that the Imperial colonial office relied on the views of the tropical medical specialists in the *Königliches Gesundheitsamt* (Royal Health Office) shows that the Imperial colonial office lacked medical experts who could make "precise" decisions without hesitation in the case of health measures in the colonies.

[216] BArch R 1001/5919, 271.

[217] BArch R 1001/5919, 273-275.

[218] On this research trip of Dr. Zupitza, see also the following. BArch R l00l/5920, 251-254.

[219] BArch R 1001/5919, 276.

[220] BArch R 1001/5919, 276, 279.

[221] BArch R 1001/5919, 276.

[222] BArch R 1001/5920, 149. The following statement by a staff physician indicates the critical attitude of the Royal Institute for Infectious Diseases toward the measures taken in Togo: "As far as I know, the arsenophenylglycine is mainly used in Togo at present. I do not doubt that as in the past in [German] East Africa, so also in Togo, the more intelligent natives associate the frequent deaths with the drug." BArch R 1001/5920, 149.

[223] BArch R 1001/5921, 256.

[224] BArch R 1001/5922, 169-170.

[225] BArch R 1001/5919, 105. In the last quarter of 1911, two cases of intoxication were reported in women who received 43 mg per kg body weight of arsenophenylglycine and died after injection because of poisoning.

[226] BArch R 1001/5921, 228.

[227] BArch R 1001/5921, 228.

[228] BArch R 1001/5921, 260-269.

[229] BArch R 1001/5921 229.

[230] BArch R 1001/591, 123.
[231] BArch R 1001/5913, 124.
[232] Ibid.
[233] The place name "Duala" is a local denomination. The inhabitants of this area, the "duala people," settled at the end of the 18th century at the mouth of Cameroon and contacted Europeans through the enslaved person, ivory, and palm oil trade. Duala remained one of Cameroon's most important trading cities. Stöcker, *Drang nach Afrika*, 71.
[234] BArch R 1001/5913, 14.
[235] BArch R 1001/5913, 143.
[236] BArch R 1001/5913, 142.
[237] BArch R 1001/5913, 141, 143.
[238] BArch R 1001/5913, 138. The governor thought that this unpopularity of disease control among the natives was partly due to their lengthy isolation.
[239] Stöcker, *Drang nach Afrika*, 149. On Settlement policy see: Eckart, *Medizin und Kolonialimperialismus*, 217.
[240] Stöcker, *Drang nach Afrika*, 149-150.
[241] Stöcker, *Drang nach Afrika*, 150.
[242] BArch 1001/5913, 133.
[243] BArch R 1001/5913, 134
[244] BArch R 1001/5913, 157.
[245] "On the report of the station manager Mr. Libert," Akonolinga from the 18th of July 1910 in BArch R 1001/5913, 231.
[246] BArch R 1001/5913, 231, 232.
[247] BArch R 1001/5913, 232.
[248] BArch R 1001/5913, 233.
[249] BArch R 1001.5913, 233.
[250] "Concerning: report and reporting of the sleeping sick camps, from the Imperial Government of Buea to the State Secretary of the Imperial Colonial Office," in BArch R 1001/5914, 34.
[251] Stöcker, *Drang nach Afrika*, 221.
[252] Dr. P. Aubder, "Mission dans la Haute-Sangha. Etudie de la Dysenterie, de la Trypanosomiase humaine, etc" in BArch R 1001/5914, 92-93.
[253] "Rapport de la mission d'etudes de la maladie du sommeil au Congo Français 1906-1908," in: BArch R 1001/5914, 90-92.
[254] BArch R 1001/5914, 93.
[255] BArch R 1001/5914, 34-35.
[256] The President of the Imperial Health Office to the State Secretary of the Interior on March 22, 1912, in BArch R 1001/5914, 66.
[257] BArch R 1001/5914, 67-68. In the opinion of Helmuth Stöcker, the incorporation of New Cameroon into the German colonial possessions was not complete at the beginning of the war in 1914. Stöcker, *Drang nach Afrika*, 151.
[258] BArch R 1001/5913, 193-195, 197-200.
[259] State Secretary of the Reich Colonial Office to the Governor of German East Africa on September 7th, 1912, in BArch R 1001/5914.
[260] BArch R 1001/5914, 155.
[261] BArch R 1001/5914, 155.
[262] BArch R 1001/5915, 222.
[263] BArch R 1001/5915, 222.
[264] Travel report from Dr. Kleine August 20, 1914, in BArch R 1001/5917,
[265] BArch R 1001/5917, 87.
[266] BArch R 1001/5917, 93.
[267] BArch R 1001/5913, 245.
[268] From this statement by the German doctor, it emerges that the colonial administration, even when it came to African sleeping sickness patients, considered above all the "welfare of the Europeans," which, as will be mentioned later, is a common theme in the policy of the camps. BArch R 1001/5913, 156.
[269] BArch R 1001/5913, 190 - 191.
[270] BArch R 1001/5913, 236, 240.

[271] BArch R 1001/5913, 244. In September 1910, a 10 m long and 5 m wide house with two rooms was completed. The larger room was used for treating or examining the sick, while the smaller one was used to accommodate the "colored medical aids." Until then, according to Dr. Freyer, "have to do all the examinations in the room serving him as a living room and bedroom," "because the room serving as a pharmacy and first aid room is completely unsuitable for this purpose because of the darkness prevailing here."

[272] BArch R 1001/5913, 245. Eckart believed that the frequent occurrence of tsetse flies in the vicinity of the camp made the treatment of the camp inmates quite tricky and that this made the relocation of the camp inevitable. Eckart, *Medizin und Kolonialimperialismus*, 207. Regarding this formulation, however, one must consider that the camp doctor, in view of the occurrence of the tsetse fly, suggested moving the camp, especially taking into account the "welfare" of the colonizers, but less of the locals. In the above-mentioned report, Dr. Freyer further stated that the camp had to be relocated because the area around the Akonolinga station "poses a risk of [contagion] to Europeans because of the tsetse flies that occur there."

[273] BArch R 1001/5914, 198.

[274] BArch R 1001/5914, 198-199.

[275] BArch R 1001/5914, 198-199.

[276] Eckart, *Medizin und Kolonialimperialismus*, 217.

[277] BArch R 1001/5914, 275.

[278] BArch R 1001/5914, 275.

[279] BArch R 1001/5916, 122.

[280] BArch R 1001/5915, 154.

[281] BArch R 1001/5916, 156.

[282] BArch R 1001/5916, 156, 206.

[283] BArch R 1001/5916, 156.

[284] BArch R 1001/5916, 207.

[285] BArch R 1001/5914, 252

[286] BArch R 1001/5914, 101, 210.

[287] BArch R 1001/5914, 296.

[288] BArch 1001/5914, 296.

[289] Eckart, *Medizin und Kolonialimperialismus*, 207. BArch R 1001/5915, 216.

[290] BArch R 1001/5916, 123.

[291] BArch R 1001/5916, 157.

[292] BArch R 1001/5916, 157.

[293] BArch R 1001/5915, 208.

[294] BArch 1001/5914, 296. BArch 1001/5915, 168.

[295] BArch R 1001/5915, 216.

[296] BArch R 1001/5915, 158.

[297] BArch R 1001/5915, 216.

[298] BArch R 1001/5915, 17-18.

[299] BArch R 1001/5915, 209.

[300] BArch R 1001/5915, 209.

[301] BArch R 1001/5915, 213.

[302] BArch R 1001/5915, 213. BArch R 1001/5916, 39.

[303] BArch R 1001/5915, 210.

[304] BArch R 1001/5916, 39-40.

[305] BArch R 1001/5916, 229. The new office building was set up with four departments measuring 5 x 5 m, each used for the doctor's office, pharmacy as well as materials and storage room.

[306] BArch R 1001/5916, 127.

[307] BArch R 1001/5916, 220.

[308] BArch R 1001/5916, 96, 122.

[309] BArch R 1001/5914. 216.

[310] BArch R 1001/5915, 169. Compare the hiding of the sleeping sick: BArch R 1001/5914, 312.

[311] The term of the camp doctor in Mbidalong is Dr. Hausch. BArch R 1001/5916, 150.

[312] BArch R 1001/5916, 150.

[313] BArch R 1001/5916, 150. Another report by this doctor, dated October 17, 1913, goes on to show that the villages in the Dume district not only took a ruthless attitude towards the local healing helpers, but also towards the members of their village community when they cooperated with the German colonial administration had worked

together. According to the camp doctor, from September 1 to 22, 1913, the medical sergeant, Dr. Hauseh, visited some villages in the Dume district to examine the sleeping sickness, where there had also been a mass exodus of residents. The medical sergeant asked the residents who remained there to show the sleeping sick people where they were hiding and, based on their information, found 129 sleeping sick people. But it repeatedly happened when visiting the sick, "That the next of kin did not want to surrender their sick, abused the traitor of the hiding place, and sometimes defended themselves against the extradition of sick people with a bow and arrow."

[314] BArch R 1001/5915. 216.

[315] BArch R 1001/5915, 157.

[316] A camp doctor had already pointed out the inadequate supervision of the camp inmates in 1910: The medical officer stationed in Akonolinga, Dr. Freyer, reported on October 2, 1910, about "severe maniacal attacks [sic.]." That the seriously ill got. Since their nerve center had already been attacked by the disease, according to Dr. Freyer, as the disease progressed, the camp inmates often had "major, bloody beating with clubs and hay knives," which they carried out until they were unconscious. "It was impossible to prevent this," the medical officer concluded, "because the post could not put a guard in the camp with its small number of soldiers, and the only gradually hired colored medical assistant was too weak" BArch R 1001/5913, 241.

[317] BArch R 1001/5914, 312.

[318] BArch R 1001/5914, 299.

[319] BArch R 1001/5914, 211.

[320] BArch R 1001/5914, 188.

[321] BArch R 1001/5915, 156.

[322] BArch R 1001/5914, 306.

[323] BArch R 1001/5916, 27.

[324] This can be proven by the higher percentage of deaths in the camps of Cameroon compared to the other colonies. As already mentioned, the "death march" of the camp inmates, which was carried out in 1913 on the closure of the Dume camp and the opening of the new Mbidalong and Momendang camps, increased the mortality rate of the seriously ill dramatically. However, the quota in Cameroon was already higher, which is illustrated by a comparison with the data from the Togo camp. In Togo, according to medical reports by Dr. von Ravens, the calculated quarterly mortality rate of the camp inmates in 1911/1912 fluctuated between 3 and 7%. Still, in the Ajoshöhe camp, it was always more than 10% in 1912/1913, and after the ambulance starts from Mbidalong, 30.4% in the third quarter of 1913 and 55.9% in the last quarter of 1913. For the data in Togo, compare BArch R 1001/5920, 154. R 1001/5921, 12, 213. To those in Cameroon: BArch R 1001/5914, 199, 276. R 1001/5915, 156. R1001/5916, 123, 157, 207.

[325] The medical officer stationed in the Akonolinga camp, Dr. Freyer, reported on October 2nd, 1910, that he had to forego all microscopic evidence from September 7th to 19th, 1910, "because there were neither cover glasses nor dyes." BArch R 1001 / 5913, 242. He went on to explain that the pathogen can usually "only be found after repeated preparation [of the blood preparation] and after hours of eager searches." The microscopic examination is therefore suitable, says Dr. Freyer, "[for] mass examinations for trypanosomes [...] not at all in the local area." BArch R 1001 / 5913, 242. In 1912, the medical officer stationed in the Ajoshöhe camp, Dr. Nägele. "None of the entrants [patients housed in the camp] can be described as trypanosome carriers: all of them had symptoms of the nervous system," and because of this, he administered the doses of Atoxyl to the patients. BArch 1001/5914, 199-200.

[326] Dr. Falb, report of the Ajoshöhe sleeping sick camp from July 1 to September 30, 1913, in BArch R 1001/5916, 123.

[327] BArch R 1001/5916, 98.

[328] BArch R 1001/5916, 99.

[329] The blindness itself was probably even more common in the camps than the doctors stated in the ornamental reports because the assistant doctor stationed in Dume, Dr. Schömig, announced at the "Meeting to Combat Sleeping Sickness," which took place in Ajoshöhe in January 1913, that the "experiences with acacetin [...] were bad", "as blindness was observed very frequently." BArch R 1001 / 5914, 318. So, at this meeting, he admitted that, in addition to the drugs already mentioned, he had also used acacetin to treat the sick and that he had seen quite a few examples of blindings as a result of the treatment. BArch R1001/5914, 210, 229.

[330] BArch R 1001/5915, 169.

[331] BArch R 1001/5916, 251.

[332] BArch R 1001/5916, 39.

[333] BArch R 1001/5916, 39. He added that from July 1 to September 30, 1913, a total of 10,366 locals had been examined by the travel doctor and that 1,733 people examined had glandular swellings.

[334] BArch R 1001/5916, 127 - 131.
[335] BArch R 1001/5916, 128.
[336] BArch R 1001/5916, 221.
[337] BArch R 1001/5916, 221.
[338] BArch 1001/5916, 221.
[339] BArch R 1001/5916, 221.
[340] BArch R 1001/5916, 123.
[341] BArch R 1001/5915, 217.
[342] BArch R 1001/5916, 18.
[343] BArch R 1001/5915, 217.
[344] BArch R 1001/5916, 18.
[345] Not Robert Koch, who died in 1910.
[346] BArch R 1001/5916, 131.
[347] BArch R 1001/5914, 228.
[348] BArch R 1001/5916, 128.
[349] BArch R 1001/5916, 219.
[350] BArch R 1001/5916, 127, 219.
[351] BArch R 1001/2916, 228.
[352] BArch R 1001/5916, 220.
[353] BArch R 1001/5916, 222.
[354] BArch R 1001/5916, 222.