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Nora Maria Pühringer BSc

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Abstract *(English)*

This master thesis examines the colonial legacies in the WHO's Malaria Eradication Programme of the 1950s, focusing on colonial mindsets and their impact on the implementation of the program. The origins of global health care interventions during colonial times are examined at first and lay the groundwork for the subsequent analysis of the Malaria Eradication Programme. A comprehensive literature analysis is used in order to allow a historiographical interpretation of the topic. To better interpret the findings, selected concepts of postcolonial theory are applied. The continuation of colonial thoughts and ideas in the planning and implementation of the program are revealed, for example in the chosen structure of the interventions, the choice of personnel, and the treatment of local workers. With the help of the two chosen concepts of postcolonial theory, numerous cases of colonial continuities are uncovered and traced back to the interventions of the colonial period.

Abstract *(Deutsch)*

Die vorliegende Masterarbeit untersucht die kolonialen Kontinuitäten im Malaria Ausrottungsprogramm der WHO der 1950er Jahre, wobei der Schwerpunkt auf kolonialen Denkweisen und deren Auswirkungen auf die Umsetzung des Programms liegt. Anfangs werden die Ursprünge globaler Gesundheitsorganisationen während der Kolonialzeit untersucht und bilden die Grundlage für die anschließende Analyse des Malaria Ausrottungsprogramms. Als Methode wird eine umfassende Literaturanalyse verwendet, um eine historiographische Interpretation des Themas zu ermöglichen. Zur besseren Interpretation der Ergebnisse werden ausgewählte Konzepte der postkolonialen Theorie angewandt. Die Ergebnisse zeigen etliche Beispiele der Fortführung kolonialer Gedanken und Strukturen in der Planung und Durchführung des Programms, beispielsweise in der gewählten Struktur der Kampagnen, der Personalauswahl und dem Umgang mit einheimischen Arbeiter*innen. Mit Hilfe der beiden ausgewählten Konzepte der postkolonialen Theorie werden zahlreiche Fälle von kolonialen Kontinuitäten aufgedeckt und auf die zuvor angeführten Interventionen der Kolonialzeit zurückgeführt.

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1 Introduction

Especially since the outbreak of COVID-19, the name Robert Koch is widely known in the German-speaking area, due to the central public health institute of Germany being named after him. The "Robert Koch Institut" provides the population with regular updates, recommendations and information concerning the corona virus. Robert Koch, a physician and microbiologist, is known for being one of the main founders of modern bacteriology in the 19th century. His fundamental contributions regarding the study of infectious diseases and tropical medicine even earned him a Nobel prize[1].

What he is not known for are the unethical and inhumane ways in which he operated in the former colony German East-Africa, where he conducted reckless experiments on humans infected with sleeping sickness. He suggested to put the infected into, in his own words, "concentration camps" and treated them involuntarily with atoxyl. Knowing that it is toxic in high doses, he still increased the dose, which led to strong side effects, blindness, and numerous deaths in the African colonial population[2]. This example shows the importance of historical awareness for colonialism and its legacies. It also shows the importance of a critical analysis of this topic, which will be implemented in the course of this thesis.

Even though the field of international development cooperation generally has come under much criticism over the years, it is important to note the absence of a historical perspective in the general public of the Global North. Due to the mostly ahistorical approaches concerning global development cooperation, development policy is not connected to the past, which results in the perception of the era of colonial rule and the era of development as two separate, opposing time periods divided by the speech of US-president Harry Truman in 1949. The research of numerous historians, however, shows clear colonial continuities in terms of actors, projects, instruments, and concepts in the development field[3].

With regard to global health, the origins of the field of global health care and hence of many global health organizations can be traced back to the colonial era. While global health efforts are a complex multibillion-dollar enterprise supported by large multinational organizations, bilateral organizations, public/private partnerships as well as private philanthropies today, the central motivations, structures, and modes of operation reach back to colonial times as far as

[1] Robert Koch Institut, 2021
[2] Baer/Schröter, 2001: 125-126
[3] Schlauß/Schicho, 2014: 2-3

the 19th century[4]. Working with archival sources, historian Samuel Coghe notices a heroic narrative of medical progress in disease control during the colonial and postcolonial era, strongly focussed on the achievements of the Europeans. The first critical views on this Eurocentric narrative appeared in the 1970s and increased during the 1990s and 2000s, analysing the exploitation, control, and violence of colonial medicine as well as its continuous, postcolonial impact on health interventions[5]. By observing the field of global health through a historical lens, it is possible to reveal colonial continuities in the structure and implementation of global health interventions, which oftentimes may have led and may continue to lead to negative consequences and limitations on the efforts to improve global health care[6].

The aim of this thesis is to historiographically analyse the origins of the global health care sector in the colonial era followed by the exploration of colonial continuities in global health care interventions. In this context, the focus lies on colonial legacies in the Malaria Eradication Programme by the World Health Organization, which was launched in the 1950s and aimed to eradicate malaria globally. The colonial structures analysed in this thesis are mostly focused on colonial mindsets and the consequences that this way of thinking brought to the implementation of the Malaria Eradication Programme. The main research question therefore is as follows:

To what extent is the WHO's Malaria Eradication Programme of the 1950s a continuation of colonial structures?

In order to answer this question, knowledge about the history of global health care is essential. The analysis of the origins of the global health sector is centred around these two sub research questions:

How did international health care develop during the colonial era and what was the reasoning behind it?

Which organizations were formed and how did they organize and carry out their health programs?

By focusing on the history of international health care interventions, this thesis analyses global health through a different perspective. Global health care is analysed by highlighting and exploring its colonial origins as well as continuities of colonial practices, mainly through connecting and interpreting existing literature about the Malaria Eradication Programme by the

[4] Packard, 2016: 6-7
[5] Coghe, 2020: 26-28
[6] Packard, 2016: 8-12

WHO. This thesis builds on the current literature of different historians by bringing the scattered information about the topic together and by analysing and interpreting said information. The exploration of global health care regarding continuities of colonial structures brings attention to the importance of history with the intention of giving a better understanding of the post-colonial global health care system, which might also lead to the filling of gaps in existing knowledge on this topic. In order to improve global health care interventions, it is essential to reveal the historical context as well as the connections of colonial and global health care systems in the form of concepts, mindsets, as well as modes of operation. By examining global health care programs through a historical lens, this thesis therefore can be considered as an important scientific contribution to the field of development studies.

In order to answer the main research question, at first the origins of the global health care system during colonial times are analysed. This is necessary as a means to demonstrate the deep entanglement of international health care interventions with colonial interests and to lay the groundwork for the subsequent analysis of colonial continuities in the Malaria Eradication Programme of the WHO. This part of the thesis is guided by the two sub research questions mentioned above. After that, the focus shifts to the analysis of colonial legacies in the Malaria Eradication Programme, and therefore to the main research question. While analysing the continuities of colonial mindsets and ideas as well as the consequences they had for the implementation of the program, connections are made with the information of the first part of the thesis concerning the origins of the global health care field. In order to better interpret these colonial continuities, selected concepts of postcolonial theory are used as the theoretical framework of this thesis, which is explained in more detail below.

2 Postcolonialism within the Global Health Care System

The focus of this chapter is on the theoretical framework used for this thesis. Firstly, the term global health is defined, followed by a chapter dedicated to the importance of history and the major points to consider when writing a historiographical analysis. Finally, the four main strands of postcolonial theory are discussed and two of them, the concept of Othering by Edward Said and the concept of Provincializing Europe by Dipesh Chakrabarty, are selected as the main theoretical foundation of this thesis. While discussing these concepts, their relevance for this thesis is explained and they are connected to the global health field.

2.1 The Definition of Global Health

Global health is becoming an increasingly widespread phenomenon, used in politics by governments as an important part of their foreign policy as well as in the academic field as part of academic programmes and degrees. Even though the term global health is frequently used, its precise definition is often unclear, as it varies depending on the context in which it appears in. In many cases, the term is not even defined at all. Global health can be understood as the current state of global health, as an objective, or as a mix of scholarship, research, and practice. Koplan et al. highlight the importance of a commonly used definition and provide such definition, which was created in collaboration with a committee of multidisciplinary and international colleagues[7]. They argue that an established definition is needed in order to agree on common goals, necessary approaches and skills, as well as on the use of resources. The definition of global health by Koplan et al. reads as follows:

"Global health is an area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide"[8]. They also add to their definition that global health focuses on transnational health problems, factors, and solutions, while it includes a variety of disciplines both within and beyond the area of health sciences. It furthermore advocates for interdisciplinary collaboration and combines population-based prevention with individual hospital care[9].

According to Koplan et al., global health evolved from and overlaps with the terms public health and international health, which, in turn, derived from hygiene and tropical medicine. While public health focusses on the health of the population of a particular country or community, international health focusses on health work abroad, especially in low-income and middle-

[7] Koplan et al., 2009: 1993
[8] Koplan et al., 2009: 1995
[9] Koplan et al., 2009: 1995

income countries. Global health reaches beyond national borders, oftentimes calls for global cooperation and focuses not only on health equity within nations, but for all people. The term global health acknowledges the two-way flow of information between countries of the Global North and the Global South and therefore uses the knowledge of diverse societies to address health issues throughout the world[10]. The exact connections and differences of the three terms are illustrated in the following table:

Table 1: Comparison of Global, International, and Public Health

	Global health	International health	Public health
Geographical reach	Focuses on issues that directly or indirectly affect health but that can transcend national boundaries	Focuses on health issues of countries other than one's own, especially those of low-income and middle-income	Focuses on issues that affect the health of the population of a particular community or country
Level of cooperation	Development and implementation of solutions often requires global cooperation	Development and implementation of solutions usually requires binational cooperation	Development and implementation of solutions does not usually require global cooperation
Individuals or populations	Embraces both prevention in populations and clinical care of individuals	Embraces both prevention in populations and clinical care of individuals	Mainly focused on prevention programmes for populations
Access to health	Health equity among nations and for all people is a major objective	Seeks to help people of other nations	Health equity within a nation or community is a major objective
Range of disciplines	Highly interdisciplinary and multidisciplinary within and beyond health sciences	Embraces a few disciplines but has not emphasized multidisciplinarity	Encourages multidisciplinary approaches, particularly within health sciences and with social sciences

Koplan et al., 2009: 1994

[10] Koplan et al., 2009: 1993-1995

As mentioned above, the distinction between those three categories is complex as they are overlapping in certain areas. Moreover, the definition has not yet achieved general acceptance and the term international health, for example, is often used as a synonym for global health by other authors. In this context, Beaglehole and Bonita discuss different definitions of global health in their article and subsequently provide their own definition, describing global health as *"collaborative, trans-national research and action for promoting health for all"*[11]. They based their definition on Koplan et al., with the difference that it is shorter, action-oriented and emphasizes the importance of collaboration[12].

Despite the lack of an official, standard definition, the definition of Koplan and his colleagues seems to currently be the most cited one in online encyclopaedias as well as by academic scholars. This definition is also chosen for the purpose of this research project, as it explains the term global health in more detail. As for the distinction between the terms international health and global health, the former is used for the time before 1945, while the latter is used for the time after the Second World War in this thesis. Reason for this is that the Second World War is seen as a paradigm shift by many historians, which is further elaborated in the fourth chapter of this thesis.

According to Arthur Kleinman, the field of global health lacks theories as well as generalized findings and frameworks to apply to different contexts and scenarios. Global health can be seen as an interdisciplinary field, connecting both natural sciences and social sciences to each other. It can therefore be analysed through many different perspectives. Kleinman, for example, created four key social theories together with his colleagues in order to generalise individual case studies in global health implementation[13]. In addition to social sciences, studies about global health were conducted from medical, ethical, educational, political as well as historical standpoints. The historical approaches to global health, through the lens of postcolonial theory, can be seen as the most relevant academic work for the theoretical foundation of this thesis.

[11] Beaglehole/Bonita, 2010
[12] Beaglehole/Bonita, 2010
[13] Kleinman, 2010: 1518-1519

2.2 The Importance of History

As mentioned above, the global health care sector is analysed through a historiographical perspective in this thesis. According to Zoe Lowery, the focus of historiography is not on what exactly happened in the past, but more so about how certain historical events are written about by different historians. Even though history has always been part of human life in the form of stories of past experiences about ancestors, gods, heroes or sacred animals, history as a formal field of study and as an academic profession has only been developed in the late 18th and early 19th century. The origin of history lies in storytelling, where stories about historical events were memorized, repeated, and passed down from one generation to the next. The difference of history to other forms with common origin such as myth, legends, poetry, and novels, is the fact that every described event and person truthfully existed in the past. Proof about this existence can be found in written documents such as letters, laws, administrative records, or work by previous historians. Another possibility is to use oral histories as evidence, for example by conducting interviews. In the 20th century, historians broadened the scope of evidence by starting to use things like photographs, clothes, houses, old coins, or the rings of trees as evidence. Furthermore, new scientific methods such as carbon-14 dating as well as DNA testing were developed, which helped historians to create and review evidence[14].

Besides the expansion of methods, there has also been an expansion of subjects examined by historians. While earlier history was mostly about disasters such as famines, plagues, floods, and wars with a focus on the roles of statesmen and generals, the focus in the 20th century shifted to ordinary workers and soldiers who were previously excluded from history. Instead of looking at records of central governments, historians examined records of individual towns as well as personal documents of the citizens, for example marriage contracts, journals, letters, or wills[15].

There was a similar approach examining the lives of indigenous peoples of colonized regions. Since many of them had no written records about historical events before the Europeans arrived, it was assumed that they had no history at all and even if they did, there was no way of proving it. As these regions were colonized, Europeans wrote about them from a highly Eurocentric perspective, describing them as “untamed” and “savage”, in need of “civilized”, European influence. Later, the independence of the colonized countries as well as the use of methods from archaeology, ethnography, linguistics and anthropology led to a change of perspective and made

[14] Lowery, 2016: VIII-X
[15] Lowery, 2016: XI

it possible to observe the history of these regions before European civilization without having written sources[16].

The historian Nick Cullather, for instance, gives an example of the above-mentioned Eurocentric perspective changing over time with regards to the development sector. In the 1950s, the focus of development literature was on the dichotomous mentality of turning "poor", "backward" countries into "modern" ones. The idea of a linear process leading from a "traditional", "backward" society to a "modern", "prosperous" one, inspired by the 5-stage model by Rostow, dominated the literary works. In this regard, the modernization, dependency, and world systems theories were seen as the only acceptable theories for a long period of time[17]. Cullather describes a movement of historians who provided a different perspective and put, in his words, *"the framework inside the frame"*[18]. Instead of using the theories of modernization as the methodology, history is used as the methodology, making modernization theory part of history. This approach allows historians to get rid of the Eurocentric, often heroic view on development and to highlight crucial factors which were previously ignored by modernization theorists. This process shifts the focus on history which was oftentimes lost, as "traditional" societies were seen as uniform, no matter if they were located in Bangladesh or Ecuador. Political problems were also pushed into the background because they were seen as technical difficulties and obstacles that slowed down the development process[19].

In this context of Eurocentrism in literature, Cullather mentions that the Europeans and North Americans used to change the definition of development to their own advantage. Being developed meant being Euro-American, which indicated that the characteristics in which the Europeans were most advanced in compared to other cultures were defined as most crucial for development. Therefore, a nation's advancement was not measured by the lifespan of its inhabitants, the durability of its traditions, the quality of its law, art, or literature - in which Asian civilizations were ahead of Europe in the 18th century, for example - but rather by the nation's material acquisitions and technical achievements. He notes that modernization theorists seeing Europe at the centre of development and modernity is not surprising considering the fact that Europe has also been defining those two terms[20].

[16] Lowery, 2016: XI
[17] Cullather, 2000: 641-642
[18] Cullather, 2000: 642
[19] Cullather, 2000: 645
[20] Cullather, 2000: 646 and 650

The historian Nils Gilman has a similar train of thought in the second chapter of his book *Mandarins of the Future: Modernization Theory in Cold War America*. In his book, he discusses the term modernization and its equation with European history by Western scholars. He explains that history was defined as the progress towards modernity, making the present of non-Western countries the past of European countries. This resulted in Europe comparing its modernity with the "other's" "backward" traditions[21]. With all this in mind, the literature on the history of development nowadays looks a lot different than the one in the 1950s.

Modern historiography is able to portray the past more completely and accurately and presents a more balanced viewpoint, including a broad range of people and perspectives. However, the writing of history will never reach a completed form because the way people think about history keeps changing constantly and relatively abruptly. Examples of this are the before mentioned realization that not only rulers, but also ordinary people are part of history, as well as the demands for racial and gender equality. Moreover, historical writing is influenced by the perspective of the respective authors. The same historical event can be interpreted differently by several different authors, depending on their specific viewpoint and connection to the event. Zoe Lowery gives an example of the Vietnam War and points out that someone who has been directly affected by it might have a different point of view than someone who has no personal connection to the event. She compares historical interpretation to the fact that two eyewitnesses often make contrasting statements of an event[22].

The American historian Frederick Cooper also highlights the importance of considering different perspectives when examining a certain historical topic or event. With regards to the debate around development, he differentiates between two viewpoints, one of which consists of diverse points of criticism while the other focuses on the benefits of development measures. While some view development as a continuation of colonialism, exploitation of people and resources, unwanted imposition of Western culture and standards, others with a more positive belief argue that those *"critiques do not distribute antidotes to childhood diarrhoea and malaria in areas of high infant mortality"*[23], thereby highlighting the successes that have already been achieved[24]. Cooper emphasizes the importance of being aware of and examining different viewpoints to a historical event, as well as analysing specific contexts and situations

[21] Gilman, 2003: 27-29
[22] Lowery, 2016: XII
[23] Cooper, 2010: 6
[24] Cooper, 2010: 6-8

instead of making generalizations, since different participants of a historical event bring different histories and perspectives to the table[25].

In this context, Corinna Unger mentions the rise of transnational history and the associated term revisionism in the field of historiography. Unger defines revisionism as *"the effort to challenge an established, dominant or hegemonic approach and replace it with a new, conceptually and/or methodologically different approach"*[26]. Existing, well-established historical facts are therefore re-examined and criticized in terms of their objectivity and lack of scientific foundation. Dominant perspectives are challenged and attempted to be replaced by alternative approaches which are considered as a scientifically more accurate representation of historical events. An example of revisionism can be found in the Western scholarship about the Cold War and its origins. In the 1950s and 1960s, it was argued that Stalin and the Soviet Union were responsible for the outbreak of the war by provoking the United States and its allies. In the 1960s and 1970s, this approach was criticized and declared as one-sided by revisionists, who argued that American capitalist interests were to blame for the conflict and outbreak of war between the West and the East. In the 1980s and 1990s, the so-called post-revisionists concluded that both the Soviet Union and the United States were responsible for the Cold War. In this context, it is important to mention that scholarly discussions about historiography and its revision cannot be seen as isolated and neutral, instead they are influenced by personal interests, political perspectives, as well as by challenges that are affecting society[27].

The concept of revisionism can be found in the rapidly growing field of transnational history, which is being professionalized and institutionalized as a sub-discipline of history. Unger explains that an abundance of historians embraces transnational history due to its focus on non-governmental actors and their interactions beyond national borders, as well as its focus on the role of culture and ideas, which contributes to a more pluralistic view of past events. The dominant role of the nation state is strongly criticized while the centre of attention shifts to individuals, groups, as well as non-governmental organizations and institutions. Historical events which took place outside of, above, or beneath the nation state are made visible, which leads to many studies focusing on the international networks of non-governmental organizations, on supranational transformation and integration, as well as on the exchange of goods and knowledge. Therefore, transnational history can be seen as an innovative revision

[25] Cooper, 2010: 20-21
[26] Unger, 2016: 17-18
[27] Unger, 2016: 18-19

and reorientation of current historiography, bringing new concepts and paradigms as well as new groups of scholars into the field[28].

To sum up the arguments of the authors mentioned above, history is constantly evolving and changing over time as historical facts are critically re-examined and complemented or replaced by new approaches, which give a more accurate representation of historical events. New topics, perspectives and scholars are added into the field of historiography, enabling a broader and more diversified view of the past. In addition to that, historians might have different viewpoints on the same historical event, depending on their personal interests or political and social backgrounds. In this thesis, the focus will be on the different perspectives of historians on the origins of the global health field as well as on the continuities of colonialism in the Malaria Eradication Programme. The goal is a historiographical analysis of the sector, especially of the eradication program mentioned above, by interpreting and comparing the existing literature on the topic. In this context, it is important to consider not only the essential arguments and interpretations of the authors, but also which sources and methodologies have been used, how the historians have framed their questions and which perspectives and assumptions they represent[29].

2.3 Postcolonial Theory

In the early 20th century, 84.6 percent of the globe was covered by Western colonial empires. The examples of early empires such as the Byzantine Empire, the Inca Empire, the Ottoman Empire or the Roman Empire show that territorial conquest in itself is nothing new in world history. However, besides the extensive geographical extent of conquest, Anshuman Prasad notes that there is a significant difference between early empires and Western colonies concerning the economic dimension of the latter. Western colonial empires not only extracted wealth from the conquered territories, but also pulled the colonies into an intricate structure of unequal transactions and economic dependence upon the West, which further led to the rise of European capitalism. In addition to establishing hegemony in a political, military, and economic way, the Western empires also attempted to establish their superiority regarding culture and ideology[30].

These colonial dynamics have shaped today's world and various practices and structures of the past persistently continue to live on. Postcolonial theory, which has evolved from various

[28] Unger, 2016: 17-21
[29] Lowery, 2016: XIII
[30] Prasad, 2003: 4-5

disciplines such as cultural studies, sociology, political science, and literary criticism, analyses this ongoing significance of complex colonial dynamics in both Western as well as non-Western countries[31]. The focus lies on the history and legacy of colonialism with regards to its continued impact on people's lives, well-being, and opportunities in life[32]. Race-thinking and structural inequities resulting from colonialism, as well as neo-colonial practices can therefore be uncovered within the scope of postcolonial theory[33]. The goal is to remember and analyse the colonial past and the continuous impact it has in today's world. The structures and practices of colonialism and their current manifestations are examined, and the dominant Western culture is decentred in order to reveal the perspectives of those who have been marginalized, as well as to expand the knowledge of how certain conceptualizations are established within particular historical and neo-colonial contexts[34].

In the context of this thesis, the continuation of colonial mindsets and their impact on the Global North's behaviour towards local populations, as well as their impact on the implementation of the program can be explained by postcolonial theory. The relevance of postcolonial theory for the topic of this thesis is discussed in more detail below, after the description of the four concepts provided by Aram Ziai.

According to Aram Ziai, postcolonial theory can be divided into four different theoretical insights provided by the scholars Edward Said with the concept of Orientalism and Othering, Gayatri Spivak focusing on Subalternity, Homi Bhabha and the concept of Hybridity, as well as Dipesh Chakrabarty, who plays a key role in the concept of Provincializing Europe. These four concepts are defined as follows:

2.3.1 Orientalism and Othering

Edward Said established the term Orientalism in order to describe the constructed differentiation between the West and the Middle East. He argues that the West constructed an image of the orient through stereotyping and homogenising the region and its population. The West could therefore create a differentiation between itself and the orient, describing itself as "modern", "progressive", and "rational" while the Middle East was seen as "backward", "irrational", and "despotic". Said argues that this distorted image of the orient's culture enabled the West's feeling of superiority as well as its legitimacy of colonial rule. Said's concept can be transmitted to other situations and is often used as the term Othering in postcolonial studies.

[31] Prasad, 2003: 4-5
[32] Browne et al., 2005: 19-20
[33] Bickford, 2014: 215
[34] Browne et al., 2005: 19-20

Othering describes the process that categorizes people as different and "foreign", whereas the "foreign" group of people is always seen as inferior compared to one's own identity. This concept has had a strong presence during colonialism and continues to be reproduced to this day. The colonial expansion of Europe, for example, led to the dichotomous classification of the "civilised", "superior" West and the "backward", "inferior" non-Western regions of the world[35].

2.3.2 Subalternity

Gayatri Spivak focuses on the group of the subaltern, questioning their ability and opportunity to speak for themselves. The subaltern are defined as marginalized, suppressed individuals who take a subordinate role in the international neo-colonial system. In her analysis, Spivak considers multiple dimensions of repression, such as race, class, and gender, relating to each other. In addition to the multidimensionality of suppression, she analyses the effects of colonialism on the construction of identities. In this context, she places a special emphasis on the effects of the colonial system and its legacies on subaltern women, for example by critically analysing the British law against widow-burning in colonial India. In her work, she concludes that the subaltern do not have a voice, since they mostly lack the possibilities as well as ability to represent and articulate their interests. Rather, it is spoken on their behalf[36].

2.3.3 Hybridity

Homi Bhabha's concept of hybridity explores the limits and breakages of colonial rule, the appropriation of its discourses as well as the unintended effects of colonial exercise of power. Bhabha breaks the clear distinction between the colonizers and the colonized and shows examples of the possibility of the ideas of those two groups blending together, creating new cultural forms. He explains that the concepts forced onto the colonized by the colonizers can be adopted and transformed into their own, which can be seen as a form of resistance to colonial power and shows the limitations of colonial authority[37].

2.3.4 Provincializing Europe

This concept is strongly influenced by the Indian historian Dipesh Chakrabarty, who argues that the focus of the science of history, but also of other sciences such as social sciences and the humanities, is always on Europe. Therefore, Europe as the main focus influences the perspective of the disciplines. Universally valid theories were established without incorporating

[35] Ziai, 2012: 308-309
[36] Ziai, 2012: 309-311
[37] Ziai, 2012: 311-312

and even considering non-Western cultures. He argues that non-European historians are always required to know the work of Western scientists, but not the other way around. The history of Europe is seen as international historiography and as the universal way to development, which discredits the history of non-Western countries. This belief of European concepts as being universal excludes other, non-Western knowledge and ideas. Chakrabarty points out the importance of acknowledging and including alternative, non-European concepts into the common discourse[38].

2.4 The Relevance of Postcolonial Theory for Global Health

Postcolonial theory has developed out of a wide body of scholarship and has been influenced by an abundance of different disciplines, which limits the clarity of this theory to a certain extent. Definitions in postcolonial theory have broad meanings and include different theoretical perspectives. In order to fully understand the concept of postcolonial theory, it is therefore necessary to piece it together by using the works of various scholars. However, the broad spectrum of this theoretical framework allows it to be applied to a variety of different situations in which colonialism impacts certain marginalized or oppressed groups of people[39].

With regards to this thesis, the postcolonial theories are suitable and relevant for exploring colonial legacies in international and global health care interventions, since they all focus on the effects and continuities of colonialism. The four strands of theories have different emphases but also show some overlapping points in certain areas. In the context of global health, postcolonial theory can be applied in order to question the superiority of Western scientific knowledge as well as to analyse health inequities that are connected to colonialism. Power relations, Western ideologies, and factors in health care which continue to discriminate against certain groups due to their race, class, or gender can be examined through a postcolonial lens[40].

For instance, postcolonial theory has been used in the research concerning the health care system of the Aboriginal peoples in Australia, focusing on the historical context which led to poor health of this community. According to Dianna Bickford, various studies on Aboriginal peoples in Canada and their access to certain health care services have been conducted as well, giving a voice to marginalized groups. Furthermore, there have been postcolonial studies on how the meaning of HIV/AIDS was constructed, explaining that the Global South was defined as the location of intervention while the United States were depicted as altruistic. There is also

[38] Ziai, 2012: 313-314
[39] Bickford, 2014: 219-221
[40] Bickford, 2014: 215

research on the knowledge about Arab families, concluding that from a Western perspective, Arab peoples were seen as "problematic" and morally and socially "inferior" to Western societies. Moreover, postcolonial theory has been used to explore the impacts of placing nursing students into clinics of the Global South, as this operation recreates colonial practices in the health care sector and enforces the racialized concept of creating "others"[41].

These few examples show that postcolonial theory can be used in various ways in order to reveal the ongoing effects of colonialism. Postcolonial theory provides a critical view on the colonial past and its legacies concerning current health care systems and services. Historical, social, cultural, economic, and political factors can be explored and connected with power differences, discrimination, structural disadvantages, and unequal health outcomes for certain population groups[42]. Concerning this thesis, postcolonial theory is used in order to reveal and analyse the continuity of colonial structures in the Malaria Eradication Programme of the WHO. Postcolonial theory provides an effective way to reveal ongoing colonial mindsets and ideas, as well as the consequences these mindsets had for the implementation of the malaria campaign. In the framework of this master thesis, the focus will be on two of the four theoretical concepts of postcolonial theories, which will be explained in more detail below.

2.4.1 Global Health and Othering

The concept of Othering by Edward Said is strongly connected to the topic of this thesis, since the feeling of Western superiority runs through the history of global health. This can be observed particularly well in the case of epidemics and pandemics, in which the construction of "others" is reinforced due to increased morbidity, widespread panic, social chaos, and the collapse of public health infrastructure[43]. Blaming certain marginal groups makes it easier to cope with fears, loss of control, and the economic, social, and political consequences of disease outbreaks[44]. So far, whenever a pandemic has occurred in the world it has been accompanied by marginalization, prejudice, and stigma[45].

A recent example of this can be observed in the COVID-19 pandemic in the form of discrimination against people of Asian, especially Chinese, descent. In the United States, for instance, former president Donald Trump blamed China for the outbreak of the corona virus on a regular basis by referring to it as the "China virus" or even as the "Kung Flu", which increased

[41] Bickford, 2014: 218-219
[42] Bickford, 2014: 218
[43] Banerjee et al., 2020: 103
[44] Dionne/Turkmen, 2020: 215
[45] Banerjee et al., 2020: 103

the discrimination against people of Asian descent. Asian-Americans had to face racist comments, refused services, and even physical assaults against them not just in public, but also at work. Similar xenophobia against Chinese and other people of Asian descent occurred in multiple other countries such as France, where Asians experienced racist harassment and isolation on public transportation, at schools, and in shops. In Italy, Chinese-owned businesses were avoided and stayed empty at the beginning of the pandemic and people from the Chinese community were prohibited to enter certain businesses or gatherings. In the United Kingdom, an exchange student from Singapore was reported to have been violently attacked by a group of men with the same racist motive. Various conservative European politicians blamed migrants and refugees for spreading the disease and thus reinforced the xenophobic attitudes within the population[46].

People of Chinese descent were also targets of discrimination in Asian countries such as Japan, Singapore, South Korea, Vietnam, and Thailand, where petitions were signed to ban Chinese visitors from entering the countries and some businesses refused to serve Chinese guests. However, not only Asians, but also other ethnicities were facing discrimination during the COVID-19 pandemic. African migrants, for example, were discriminated against in China because a few Nigerians tested positive in a city with a large African community. In Italy, African migrants also faced discrimination and Othering as the politician Matteo Salvini was speaking out against the docking of a rescue boat of African migrants due to the fear of the corona virus, even though at that time the whole African continent counted one single COVID-19 case. Furthermore, the pandemic led to religious discrimination, for example in India, where Muslims were blamed and physically assaulted for spreading the corona virus. Muslim homes and shops were burned down, and a mosque and shrine were vandalized because five people of the Muslim community in that area had tested positive for the virus[47].

Similar patterns of behaviour can be observed throughout history, for instance in colonial times when diseases like the Asiatic flu, Asiatic cholera, or the Asiatic plague, were associated to certain areas, even though the outbreaks were all over the globe. There are many more examples of Othering, reaching back as far as the 13th century, when the Catholic church claimed that the Jews were responsible for the outbreak of the bubonic plague by poisoning the water and spreading the disease[48]. Fast forward to the 19th century, the outbreak of the third bubonic plague was connected to race, immigration, and class, which led to racialized plague control

[46] Banerjee et al., 2020: 104; Dionne/Turkmen, 2020: 219-220
[47] Dionne/Turkmen, 2020: 221
[48] Banerjee et al., 2020: 103-104

measures and the discrimination against marginalized groups, primarily people from Chinese and Japanese descent[49]. The bubonic plague was not the only incident that led to discrimination against Chinese migrants in North America. During the smallpox outbreak in the late 19th century, San Francisco's Chinatown was seen as the source and centre of infection and the Chinese were heavily categorized as the "others"[50].

Another example of Othering in the context of global health can be found in the HIV/AIDS pandemic throughout the 20th century and up to this day. Early on, AIDS was constructed as a problem of marginalized groups of society, particularly of gay white men. Furthermore, it was assumed that the pandemic had its origins in Haiti, which made the Haitian community in North America victims of accusation and discrimination. Moreover, the Ebola pandemic centred in West Africa from 2013 to 2016 led to discrimination and Othering of African immigrants. Especially after a traveller from Liberia was diagnosed with the disease in Texas, the resulting panic and fear changed the American population's perception of immigrants, and people of African descent in that area experienced severe discrimination[51].

These examples demonstrate that the concept of Othering can be used in many different scenarios throughout history in order to explain and analyse the distinction of "us" versus the "others", and the feeling of superiority that comes with this dichotomous way of thinking. As mentioned above, this distinction is especially prominent during epidemics and pandemics, which is why this concept is suitable for the analysis of the origins of the global health care field as well as of the Malaria Eradication Programme of the WHO.

2.4.2 Global Health and Eurocentrism

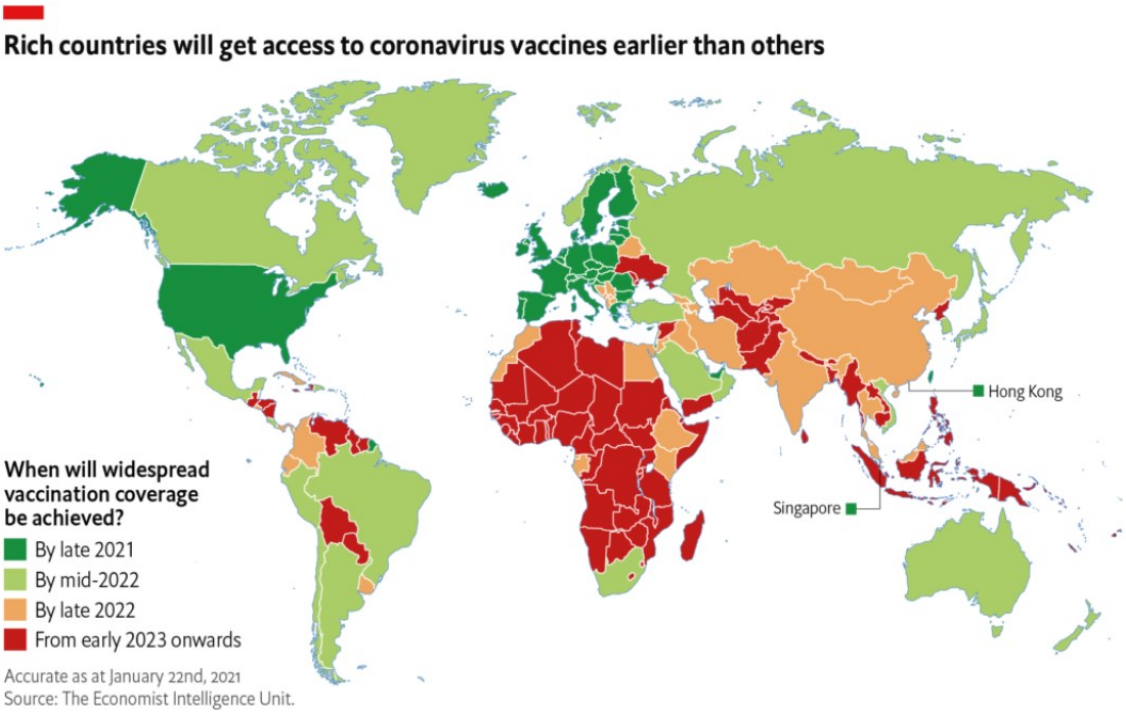
For the topic of this thesis, the concept of Provincializing Europe by Dipesh Chakrabarty is of significant importance as well, due to its criticism on Eurocentric historiography. Focusing solely on the history of Europe creates an ahistorical view of the world in which the history of non-Western countries is seen as inferior and a failure compared to Europe, or it is made invisible and therefore not considered at all in Western literature. Furthermore, colonialism is mostly seen as an unpleasant thing of the past and is not being connected to the present[52].

Taking up the before mentioned topic of the COVID-19 pandemic, the power asymmetries originating from colonialism can, for example, be seen in the vaccine distribution. In the

[49] Dionne/Turkmen, 2020: 216-217
[50] Dionne/Turkmen, 2020: 216
[51] Dionne/Turkmen, 2020: 217-219
[52] Ziai, 2012: 313-314

negotiations about vaccine deliveries, the countries of the Global North put their own interests first, while the ones of the Global South were being ignored[53]. This Eurocentric conduct led to a highly uneven vaccination coverage to the detriment of the Global South, which is portrayed in Figure 1. In order to historically analyse the global health care sector, it is therefore necessary to uncover and critically assess the Eurocentric view on this topic.

Figure 1: Uneven COVID-19 Vaccination Access



Economist Intelligence Unit, 2021

The historians Frank Huisman and Nancy Tomes, for instance, address this Eurocentric view in their article about the connection between global health and the concept of Provincializing Europe. They bring attention to their position as scholars from the Global North and the associated issues about writing from a global perspective. In this context, they mention the problem of the "white gaze" in development, which derives from Robtel Pailey. The history of development originates from slavery, colonialism, and imperialism, which manifested into globalization and neoliberalism in today's world. This colonial past continues to produce a racialized view in the field of global health, as Western whiteness symbolizes expertise. Concerning academic writing, the scholarship about global health is influenced by the asymmetric power dynamics that are existing in partnerships in the global health field. For

[53] Bump/Aniebo, 2022: 1; Huisman/Tomes, 2021: 197-198

instance, scholars from high-income countries are a lot more likely to win placements in prestigious, renowned journals than researchers from low-income countries[54].

Additionally, all leading institutions of research, education, commerce, and international governance are based in the countries of former colonial powers. Journals and leading authors of global health research are mostly from countries of the Global North, even though their topic of writing is places and people of former colonies. The historian Jesse Bump and molecular geneticist Ifeyinwa Aniebo give an example of the 30 million US-Dollar grant of the Malaria Initiative of the United States in 2021, which was given to 7 different institutions in order to support African governments in malaria control. However, these institutions were all based in the US, UK, and Australia, while none of them were based in Africa. In addition to that, 99% of research funding for malaria goes to institutions based in the Global North, where the disease is not a health issue, but an academic speciality. The authors add that in the field of global health, focusing on malaria, the connection to history and anti-colonial scholarship is quite weak, even though the academic field of global health directly descends from the field of tropical medicine, which was founded by colonial officials in the 20th century[55].

In current global health literature, malaria is often described clinically and technically by focusing on the parasite and vector, as well as climatically by blaming natural environments for the disease. This leads to an uncritical depiction of malaria, in which colonial legacies are overlooked. The way malaria is studied and researched today was produced in times of colonialism with the intent to protect colonial interests. The schools of tropical medicine built in colonial times are still the leading institutions in the global health field today. Most of the members of academic tropical medicine had been in colonial service, which is why there was such a close connection between the scientific field and the colonial administration. Also, all newly recruited colonial medical officers were obligated to receive their training at schools of tropical medicine, which mandatorily tied them to colonial ideas. Bump and Aniebo go so far as to say that the study of malaria supported Europeans to continue their colonization more effectively[56].

Research about malaria had the goal to control the disease without having to invest in development, which was seen as unimportant in colonial times. These origins of malaria research explain why up until today, Northern institutions are dominant in debates about the

[54] Huisman/Tomes, 2021: 197-198 and 208
[55] Bump/Aniebo: 2022: 1-2 and 4
[56] Bump/Aniebo, 2022: 5-6 and 8

Global South. In colonial times, local people at times participated in the collection of data, just like today when they carry out surveys and do the legwork of research in their languages and cultures, which metropolitan specialists never made the effort to learn. However, indigenous people usually were not allowed to participate in the analysis and decision-making that followed the data collection. Bump and Aniebo argue that little has changed, as it is usually the people of the Global North who end up with more credit when collaborating with indigenous people[57].

Bump and Aniebo also point out that the main strategies in malaria control today involve products like bed nets and pharmaceuticals, which are produced outside of malarious areas in which they are needed. Strategies that were used to eradicate malaria in the Global North, like swamp drainage, housing improvements, and other methods focused on improving general health, are not common today[58].

The cultural anthropologist Betsey Brada also gives a good example of Eurocentrism in the global health sector by examining the involvement of American doctors and medical students in Botswana's largest hospital between 2004 and 2008. Whenever new staff from the Global North arrived, which was sometimes only for a few weeks, they were neither briefed on Tswana medicine that was often used in conjunction with biomedicine, nor on social norms concerning gender, body, and generational relations. In addition, a distinction between, in this case, the United States and Botswana was made in terms of the setting, resources, and guidelines. The medical knowledge of the Global North was seen as superior to the local knowledge and practices, and practicing medicine in Botswana was portrayed as going back in time[59].

According to Huisman and Tomes, it is essential to understand that there is no universal pathway to modernity and Europe cannot be presented as a role model that the rest of the world needs to catch up with. Therefore, the solution to improve global health does not lie in the distribution of Western biomedical knowledge to every area of the world. Asymmetries in knowledge, power, and resources give the global health sector a much more complex structure that cannot simply be fixed by the one-sided implementation of Western "expertise". The Global South needs to be able to create its own intellectual space, including its own priorities and agendas, which calls for a decolonization of the global health field. All in all, the concept of Provincializing Europe allows for a more sophisticated and critical historical perspective on

[57] Bump/Aniebo, 2022: 8-9
[58] Bump/Aniebo, 2022: 9
[59] Brada, 2011: 287 and 294-296

global health governance, which is useful in order to explore new, alternative ways of thinking about and decolonizing the global health system[60].

In conclusion, the theory of Othering by Edward Said as well as the theory of Provincializing Europe by Dipesh Chakrabarty are both considerably relevant and suitable for the analysis of the global health field. The concept of Othering explores the dichotomous way of thinking and the subsequent discriminatory behaviour towards certain population groups, while the concept of Provincializing Europe explains the feeling of Western superiority concerning knowledge and research. Therefore, the theoretical focus of this thesis is limited to those two concepts of the postcolonial theories, which are used to explore and analyse the origins of the global health sector in colonial times as well as to examine the continuities of colonialism in the Malaria Eradication Programme of the WHO.

[60] Huisman/Tomes, 2021: 199 and 211-212

3 Analysis of the Origins of the Global Health Care Field

The growing interest that global health received over the past years sometimes leads to this field as being seen as new. According to the historian Paul Farmer and his colleagues, there certainly are various new features concerning global health issues in the 21st century. However, transnational diseases and pandemics have been present for a long period of time[61]. Farmer and his colleagues describe it as follows:

"The new, as always, is rooted in the old, and serious biosocial exploration of global health today would be incomplete without plumbing history"[62].

They point out the importance of reflecting previous history in order to solve current global health problems. History helps to comprehend the successes and failures of previous international and global health interventions, which in turn improves the global health efforts of today[63]. In this chapter, the beginnings of the global health field are explored and analysed in order to uncover its colonial origins and its close ties to the interests of colonial powers. This chapter also establishes the foundation for the subsequent analysis of the Malaria Eradication Programme, which is explored in chapter 4 of this thesis.

3.1 The Beginning of Modern International Health Policy

In this chapter, the beginnings of international health interventions are explored and the reasons for their development are explained. In addition, the golden age of bacteriology is described due to its importance for the shift to the model of disease eradication programs. Some examples of military-style disease eradication campaigns are given to demonstrate the colonial and racist attitudes towards the local populations, which is an important groundwork for the later analysis.

3.1.1 The International Sanitary Conferences

Paul Farmer and his colleagues point out that there is no exact date for the start of colonial medicine. They claim that attempts to improve health transregionally go back as far as the Roman Empire and expanded even more after the fall of Rome, especially in order to stop plagues that disrupted trade. However, more direct predecessors of international health interventions can be seen in the European colonies. Farmer et al. explain that since the first expeditions crossing the sea, health became a concern for European colonial rulers. In the course of their expeditions, Europeans were exposed to new diseases in their colonies.

[61] Farmer et al., 2013: 33
[62] Farmer et al., 2013: 33
[63] Farmer et al., 2013: 33

According to Farmer and his colleagues, the fear of these new diseases led to early international health interventions[64].

In the writings of the historians covered in this thesis, there is a general agreement about international health efforts starting with the increased sea voyages of the Europeans. Sunil Amrith, a historian focusing on South and Southeast Asia, argues that especially the cholera epidemics effecting Europe between 1830 and 1847 led to increased activity at inter-governmental cooperation in the field of public health[65].

The historian Thomas Zimmer agrees with this standpoint as he describes the International Sanitary Conferences, starting in 1851, as the beginning of a modern international health policy. On the 23rd of July 1851, the first International Sanitary Conference took place in Paris. Representatives of 12 European countries met to discuss measures against the plague, yellow fever, and cholera in order to protect the European citizens. For the first time in history, diplomats as well as medical professionals were included as official representatives in the decision making of the conference. This first conference is seen as an important milestone in the history of global health because it started an important tradition: the representatives of the European countries started meeting on a regular basis. There have been 11 International Sanitary Conferences until 1903 and after that, permanent international organisations were founded [66].

Zimmer as well as Farmer and his colleagues connect the beginnings of international health policy with a general increase in cross-border communication in the second half of the 19th century due to industrialization. New means of transportation, new migration flows as well as new technologies and modes of communication led to an improvement of international and transnational networking. Especially in the fields of science and technology, the inter- and transnational communication increased, which can be seen in the increasing number of congresses and conferences during that time. Furthermore, new forms of intergovernmental cooperation developed, and an abundance of international organisations were founded towards the end of the 19th century[67].

Thomas Zimmer argues that especially in the field of disease control, the European states were working together before even having national health systems. Long before the middle of the

[64] Farmer et al., 2013: 34-35
[65] Amrith, 2006: 5
[66] Zimmer, 2017: 27
[67] Farmer et al., 2013: 49; Zimmer, 2017: 28

19th century, the European nations had introduced quarantine rules, without knowing how diseases were transmitted. While the focus in earlier centuries was mostly on the plague, smallpox, and typhus, it shifted to cholera in the 19th century. Even though cholera had already existed on the Indian subcontinent for thousands of years, it only started becoming a problem in Europe in the 19th century. The reason for this were the improved trade relationships in the industrial era, which resulted in a much faster transportation of goods as well as humans by steamships and railways. Between 1826 and 1832, cholera occurred for the first time in Europe and was called the "Asian disease"[68].

The focus was mostly on ships that were sailing from the Indian subcontinent to Europe and ships which had pilgrims from Mecca onboard. Zimmer states that especially pilgrimages to Mecca were believed to be contributing strongly to the spread of diseases in the 19th century. The hygienic conditions on board were disastrous. In the year of 1865, 15.000 out of 90.000 pilgrims died of cholera. As a reaction to the fear of cholera, radical measures and quarantine rules were put in place, which were only loosened and standardized in the late 19th century[69].

Paul Farmer and his colleagues add that in the late 19th and early 20th century, colonial populations were often described as "uncivilized", "unclean", and "primitive" and therefore seen as a source of disease. They take cholera as an example, where Indians were blamed for the outbreak of the disease[70]. In 1872, a British official described Indian pilgrims as follows:

"The squalid pilgrim army of Jagannath with its rags and hair and skin freighted with vermin and impregnated with infection, may any year slay thousands of the most talented and beautiful of our age in Vienna, London, or Washington."[71].

Looking back at the measures of the 19th century, Zimmer explains it as *"much ado about nothing"*[72]. The measures focused on ship traffic as cholera spread mostly on the land route from the Indian subcontinent to Europe. He doubts that the quarantine measures prevented cholera from spreading in Europe and concludes that the international cooperation of the 19th century had little to no impact on the health of European citizens. The historical meaning of the conferences of the 19th century therefore does not lie in the efficiency of the measures, but in the initiation of intergovernmental cooperation in the field of public health. According to

[68] Zimmer, 2017: 29
[69] Zimmer, 2017: 31
[70] Farmer et al., 2013: 39-40
[71] Farmer et al., 2013: 41
[72] Zimmer, 2017: 32

Zimmer, the International Sanitary Conferences can thus be seen as the beginning of international health policy[73].

Concerning malaria, Bump and Aniebo mention that the disease and its control is closely tied to colonization. They claim that malaria was one of the largest obstacles for colonial powers, as many white settlers, especially in Africa, died of malaria. For example in towns on the coast, such as Lagos or Freetown, the mortality of colonial settlers and administrators was 70-80 per 1000 in the 1800s. The first 3 candidates for the job as governor in the Gold Coast declined because of the major health risks, and the first one who took the job died of malaria the same month. In Sierra Leone, the average annual mortality of Europeans was almost 500 per 1000 from 1817-1838. Therefore, malaria was preventing the Europeans from expanding their colonial power, which is why they were interested in controlling the disease[74].

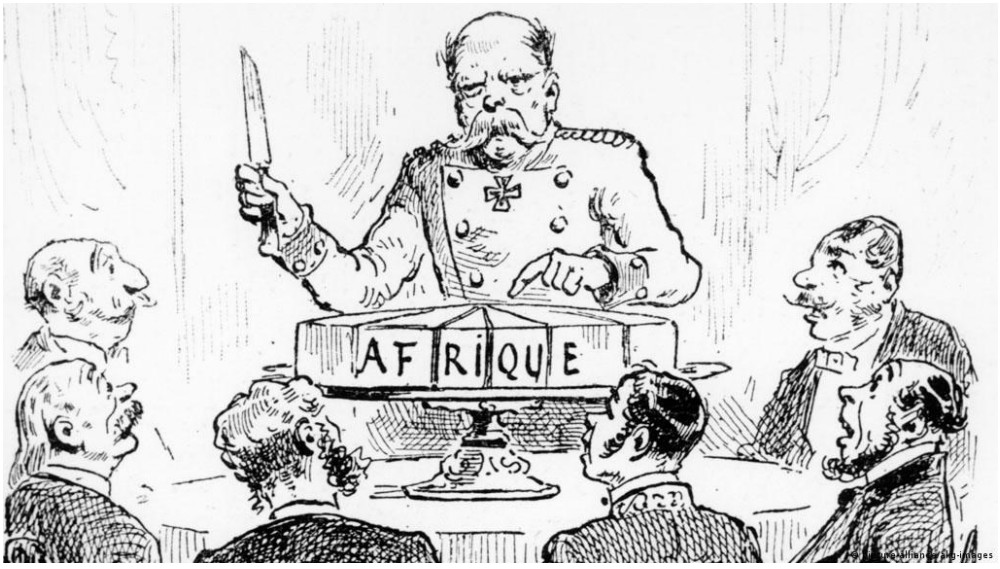
Up until this point, it can already be observed that international health efforts started to become relevant once European colonial forces expanded their territory. The motive for these health efforts were external interests due to Europeans being fearful of the diseases in their new colonies. The goal was to control or get rid of diseases so that the European officials and settlers were safe. Cholera was described as the "Asian disease", and Indians were blamed for spreading it. Not only Indians, but colonial populations in general were mostly described as "primitive", "unhygienic" and "uncivilized". The European forces expressed a feeling of superiority and made a clear distinction between themselves and the "others", who in this case were the colonial citizens. These descriptions fall into the category of Othering by Edward Said, which is used later to analyse in which way they are still present in postcolonial situations.

3.1.2 The Golden Age of Bacteriology

By the end of the century, only a few places were not under colonial rule. Farmer and his colleagues mention the Berlin Conference in 1884, where European colonial empires split the African continent among themselves like a piece of cake[75]. This can be seen in this well-known French caricature from 1885, in which the German chancellor Otto von Bismarck divides Africa among the European colonial powers:

[73] Zimmer, 2017: 32-33
[74] Bump/Aniebo, 2022: 3
[75] Farmer et al., 2013: 41

Figure 2: French caricature of Otto von Bismarck dividing Africa



Fischer, 2015

Thomas Zimmer explains that the goal of the disease control measures of the 19th century was to protect Europe from the dangers of the rest of the world. It was known that diseases do not stop at national borders and that it therefore was necessary to cooperate with other nations. The European states attempted to separate the "sick" from the "healthy" world. However, Zimmer states the focus was disease control and there was no idea of a collective, global state of health yet[76].

Zimmer explains that during that time, there was a scientific conflict between different medical professionals concerning the cause of cholera[77]. The historian Randall M. Packard focuses more on the US and describes the same scientific conflict as Zimmer with the example of yellow fever. While some thought it was a contagious disease that spread mostly on boards of ships, others believed the disease was a result of poor sanitation. Therefore, some experts advocated for strict quarantines restricting the movement of ships, while other professionals wanted to improve the sanitary conditions in order to prevent the spread of yellow fever. Both approaches were being applied at the end of the 19th century by measures such as international trade regulations, urban sanitation, and different forms of quarantine[78].

It was only when the so-called golden age of bacteriology started at the end of the 19th century, mostly characterized by the research of Robert Koch, that the conflict was resolved. Due to Koch's work, which was also mentioned by Farmer and his colleagues, bacteriological

[76] Zimmer, 2017: 33
[77] Zimmer, 2017: 32
[78] Packard, 2016: 17

knowledge was used from that moment on in disease control[79]. Farmer et al. state that the emergence of the golden age of bacteriology led to the belief that diseases could be eliminated by fighting nonhuman vectors, such as mosquitoes, without having to provide basic health care systems[80]. Packard agrees as he states that the role of the *Aedes aegyptei* mosquito concerning the transmission of yellow fever was discovered in Cuba during the US military occupation, which led to a different approach in international health interventions[81].

Randall Packard explains the effect of the golden age of bacteriology on disease control in more detail, using the US interventions in their colonial possessions as an example. Due to the war between the US and Spain starting in 1898, the US had become a colonial power by invading Cuba and the Philippines. From the moment the transmission of diseases through mosquitoes was discovered, health authorities were able to better prevent and eliminate yellow fever. In Cuba, US health authorities directly intervened in the lives of the local population in order to eradicate yellow fever. The eradication of yellow fever in Cuba was used as a model for future international health interventions and Packard describes it as a "training ground" for health authorities who would later have positions in international health organisations. Controlling cholera in the US' other colonial possession, the Philippines, was another colonial "training ground" and underpinned the model used in Cuba[82].

The goal of invading Cuba was to enhance Cuban independence from Spain and stabilize trade relations in the area. Another goal, however, was to fight against the threat of yellow fever by eliminating it at the source, which in the American view was Cuba. Colonel William Gorgas was responsible for eliminating yellow fever in Cuba, where he arrived in 1898. He first used the traditional strategy which consisted of quarantine and additionally improving the hygienic conditions of Havana and other large cities, which were in extremely poor condition at the time. This strategy drastically improved the health of the population and significantly decreased the overall death rate. However, yellow fever continued[83].

Since the sanitation efforts were not successful in controlling yellow fever, Gorgas used a new approach. In 1901, his focus shifted to the *Aedes aegyptei* mosquitoes. In order to attack the mosquitoes, the houses of yellow fever patients and their neighbours were fumigated, and mosquito larvae were killed by screening, covering, or oiling open water sources. The local

[79] Farmer et al., 2013: 41 and 50; Zimmer, 2017: 32
[80] Farmer et al., 2013: 42
[81] Packard, 2016: 18
[82] Packard, 2016: 18-19
[83] Packard, 2016: 19

population did not agree with those intrusive measures. Fixtures and fabrics were stained in the process, water containers were emptied or destroyed, and oil was sprayed on the surface of water in cisterns. Since Cubans were exposed to yellow fever for many years, a large amount of the Cuban population was immune against the disease and did not see it as a threat. *"Yellow fever was much more of a threat to newcomers, especially to the invading American military troops, most of whom were susceptible to the disease"*[84], Packard explains.

In order to establish cooperation, sanctions and punishment for those who refused the methods were put into place. Therefore, the elimination of yellow fever in Cuba was possible because the country was under US military occupation at the time. According to Packard, the US had the authority to introduce sanctions and did not have to think about collaborative methods to engage with the local population. Gorgas's strategy was successful, and he was therefore sent to Panama, where he succeeded as well[85].

Packard points out that the campaigns of William Gorgas were similar to colonial medical campaigns against cholera, the plague, sleeping sickness and malaria in Africa and South Asia conducted by European colonial authorities. Like other colonial medical campaigns, eradicating yellow fever was mainly based on external interests and not so much on the interests of the colonized populations. The campaigns had a top-down approach, with little to no cooperation with the local populations. Cooperation was established through authority and compulsion. Furthermore, the campaigns did not focus on developing a broad-based health system but instead focused on a single disease only. When Gorgas realized his system of controlling mosquitoes was working, he saw no need for wider sanitation efforts[86].

In general, the goal of colonial health services was to protect the health of European and American colonial personnel, since they were important to the colonial economy[87]. Farmer and his colleagues agree as they claim that colonial medicine was originally designed for the military and then slowly expanded to European administrators and civilians in the colonies. Therefore, colonial medicine mostly existed in urban centres, areas of economic production, and important port towns. Colonial medicine then expanded to the local labouring populations since they were essential to carry out colonial interests by extracting economic resources[88]. In this context, the historian Samuël Coghe also mentions this shift in European beliefs at the turn

[84] Packard, 2016: 20
[85] Packard, 2016: 20-21
[86] Packard, 2016: 22
[87] Packard, 2016: 22
[88] Farmer et al., 2013: 38

of the century. Even though Africans had an advantage concerning tropical diseases, they still suffered from many illnesses and their mortality rates were extremely high. Coghe and Sunil Amrith share the same view as they explain that the value of the African population changed as Europeans needed a strong workforce to boost their economic development[89]. Farmer and his colleagues, as well as Sunil Amrith, further argue that colonial medicine was often used as an excuse and justification for colonialism by showing the positive effects it had on the colonial populations[90].

The physician and professor Walter Bruchhausen agrees and mentions that in the beginning, colonial doctors did not bring many health benefits to local populations due to racist attitudes and brutal conquest wars. The main focus was on their own staff and only changed once the colonial economy around 1900 was developed. European doctors wanted to gain local trust and prestige, which is why they preferred treating locals who had important roles in politics or economics. Over time, there was a stronger focus on the health of local populations since the economic exploitation of the colonies was only possible with local labour forces[91].

Bump and Aniebo provide a similar argument as they explain that the scientific research on malaria control could easily be disguised as motives of humanitarianism, saviourism, and charity, which justified colonial endeavours. In reality, the goal was self-protection and the strengthening of the local labour force[92].

Randall Packard explains that the disease campaigns at the time were successful because of colonial environments that existed in places where the campaigns were carried out. Colonial authorities were able to enforce laws and to act in their own interests. In this context, Packard also mentions that it was believed the local populations were “dependent” and “incapable” of taking care of their own health. Local knowledge concerning health as well as existing infrastructures were therefore ignored by colonial personnel. Packard notes that Gorgas paid very little attention to the local population due to his focus on the health of the white Americans. While he sometimes complained about his workers and the need for supervision, Packard did not find much evidence of racially charged language that was common among other whites living in colonial settings during that time. In the Philippines and Panama, racial language was

[89] Amrith, 2006: 9; Coghe, 2020: 7-8
[90] Amrith, 2006: 8; Farmer et al., 2013: 37
[91] Bruchhausen, 2020: 19-21 and 26
[92] Bump/Aniebo, 2022: 6

much stronger. However, Gorgas did think that indigenous populations were "incapable" of developing the tropic areas and depended on the white settlers[93].

Over the 20th century, Gorgas' strategy became a model for international and global health efforts. He became very well known within the public health sector which led him from colonial medicine to international health. As a colonial medical authority, he specialized in tropical medicine and attended various medical and public-health conferences[94].

Another colonial possession of the US was the Philippines, which is mentioned by both Packard and Farmer and his colleagues. While the US-occupation of Cuba only lasted a few years, it lasted for decades in the Philippines and was characterized by much more intensive interventions. Like in Cuba, the tropical diseases in the Philippines were a big problem for the US soldiers[95]. Farmer et al. claim that the Americans described Filipinos as "backward" and "unhygienic", blaming them for the cholera epidemics that had a tremendous effect on American soldiers. In 1902, a cholera epidemic killed thousands of soldiers, which led to aggressive measures against cholera in the Philippines. Filipinos were seen as a threat to US soldiers[96].

The US therefore launched intensive campaigns against the plague and cholera, such as forced quarantines, burning infected villages, and burying victims of disease in mass graves. For the local population, these interventions felt more like instruments of war than of public health. The US launched similar military-style health campaigns to the ones of Gorgas. However, instead of mosquitoes, the Filipino population was the primary target of the sanitation efforts since they were seen as the main source of disease and therefore as a threat to the health of the American officials. The common colonial opinion that the local population was unable to improve their own health conditions and needed help from the Western world was dominant. A US Army doctor who was sent to the Philippines compared the local population to children who needed strong guidance[97].

While several campaigns were launched to sanitize and educate the Filipino population, barely any work was going into the development of basic health services. At that time, the focus was on creating safe living conditions for the Europeans and Americans since indigenous people were seen as "hopeless", "living in filth", and "unable" to be sanitized. Victor Heiser, who was

[93] Packard, 2016: 22-23
[94] Packard, 2016: 23
[95] Packard, 2016: 29
[96] Farmer et al., 2013: 43
[97] Farmer et al., 2013: 43-44; Packard, 2016: 29

responsible for the campaigns in the Philippines, agreed with those racial attitudes. However, he did not believe that they could not be taught sanitary standards and focused on educating them by forceful and intrusive measures. He had almost full military power and therefore was able to invade the domestic spaces of the Filipino population[98].

Packard highlights that the US did not bring knowledge of sanitation and bacteriology to the Philippines. There was already some research on polluted water, malaria, and cells by Filipino researchers in the 1880s. They wanted to put an end to the claims of Spanish colonialists that the Filipino environment was "unhealthy" and that Filipino bodies were "full of diseases" – a view that also dominated the opinion of US officials. However, the research of the Filipino scientists was ignored by the US[99].

As these examples have shown, the idea was to use medical science in order to eradicate centuries-old diseases and allow tropical lands to experience economic development. Randall Packard notes, however, that history is much more complicated. He explains that not only this one approach was used to control diseases, but multiple other alternative approaches. The strategy of Gorgas, for example, was not the only one he implemented. However, at the time as well as in the future, there was little attention paid to his other interventions[100].

While Gorgas was mainly concerned about diseases affecting American workers, like yellow fever and malaria, he was also interested in pneumonia. The West Indian workers, who made up most of the canal labour force in Panama, heavily suffered from pneumonia. Gorgas identified the overcrowding of workers in barracks as the cause for the high pneumonia mortality and gave the workers land on which they were able to build their own huts. He also allowed them to bring their families with them and doubled their, still tremendously low, wages. Due to his interventions against pneumonia amongst the West Indian workers, the building of the canal could be completed[101].

Hence, he also initiated interventions where he addressed the social determinants of health but is only remembered for his military-style disease campaigns. Before the rise of bacteriology and parasitology, focusing on social determinants was quite common. Most of the 19th century was characterized by this sanitary approach that addressed environmental conditions. However, after the bacteriological discoveries of the 1880s, the new methods overshadowed the sanitary

[98] Packard, 2016: 30
[99] Packard, 2016: 29-30
[100] Packard, 2016: 18 and 24
[101] Packard, 2016: 24

approaches. In spite of that, Gorgas did not let go of the belief in tackling broader determinants of health and therefore valued multiple approaches to improve public health. He was not the only one with this belief. Packard notes that during the first half of the 20th century, it was common for public health authorities to value both approaches. However, the approach to tackle the social determinants of health was mostly undermined by disease eradication campaigns[102].

Packard believes the reason Gorgas's other strategies were ignored was firstly because pneumonia did not affect Americans in the tropics, while malaria and yellow fever were serious problems for Americans. Secondly, the US believed in the power of tropical medicine and was able to connect the completion of the Panama Canal to their scientific and technical knowledge. Thirdly, colonial expansion could be rationalized by demonstrating the positive effects of America's scientific knowledge to the local populations. Furthermore, Randall Packard notes that Gorgas's anti-mosquito campaigns took centre stage in international health interventions because the newly created International Health Board of the Rockefeller Foundation showed an interest in them. The approach of the Rockefeller Foundation was a biomedical one, and the successful campaigns of Gorgas served as a positive example for this model[103].

All in all, the way the US handled the health of their colonial possessions created a model for public health practices concerning disease control in dependent populations. For most of the 20th century, these practices dominated international health activities. After the First World War, US medical personnel which was employed in Panama and the Philippines was recruited for elimination programs by the International Health Board of the Rockefeller Foundation. The early history of international health interventions was therefore dominated by international health experts who had a common view and vision of health. Medical science and disease elimination campaigns took centre stage in international health activities[104].

It can be observed that since the golden age of bacteriology, the focus of colonial powers was on disease control. The US tried to tackle yellow fever in Cuba and the Philippines, with the intent of protecting its military troops and colonial personnel. The measures it took were quite intrusive, without the incorporation of local populations, and were often happening against their will. The local population was still seen as "backward", "living in filth", and "incapable" of improving its own situation. Alternative approaches to disease control were considered, but were dismissed in the end due to the strong belief in Western scientific knowledge and the

[102] Packard, 2016: 24-26
[103] Packard, 2016: 28
[104] Packard, 2016: 31

interest of the Rockefeller Foundation. Besides the concept of Othering being quite visible throughout this chapter, there is also an example of the concept of Provincializing Europe. The research and knowledge of the Filipino researchers was completely dismissed by the US authorities, as they believed that their medical knowledge was superior to local knowledge.

3.1.3 The Racialized Discourse of the Colonial Powers

The historians analysed in this thesis bring up many other arguments and examples of the racialized discourse of the colonial powers, in which they treated colonial populations as their inferior and segregated themselves mentally as well as physically from the populations of their colonies.

Regarding disease control, for example, Paul Farmer and his colleagues as well as Walter Bruchhausen bring up an important point that is worth mentioning. While Zimmer and Packard focus strongly on the European and US-American colonial powers fighting diseases in their colonies, Farmer and his colleagues mention a different viewpoint. Not only were Europeans exposed to new diseases, but they in turn also brought many diseases with them to their colonies. Diseases introduced by colonial powers, for example measles, smallpox, and tuberculosis, resulted in millions of deaths of American natives[105]. Bruchhausen also mentions the mortality rates of indigenous populations due to diseases from the Europeans. He claims that *"... there is a good reason to believe that more people in the Incas and Aztecs have fallen victim to infectious diseases than to the violence of the European invaders"*[106].

Walter Bruchhausen also mentions the transatlantic slave trade in the course of European expansion as a source of new epidemics, as diseases were brought to new regions on the one side, and the people transported on the ships were exposed to new health risks on the other side[107].

According to Farmer and his colleagues, the high mortality rates of indigenous populations were not alarming for the colonial powers and some even infected indigenous populations on purpose. They mention British officials as an example, who handed out blankets infected with smallpox to American natives, knowing that the European settlers were immune against this disease[108].

[105] Farmer et al., 2013: 35-36
[106] Bruchhausen, 2020: 4
[107] Bruchhausen, 2020: 13
[108] Farmer et al., 2013: 35-36

In addition, Farmer and his colleagues explain that British colonists in South America used this difference in disease immunity to justify racial hierarchies. They claimed that European bodies were superior to those of "savages" since they were immune to certain diseases. Since the mortality rate of European soldiers in Africa was much higher than the mortality rate of soldiers in the United Kingdom, it was believed that black bodies were better suitable for working in hot climates than white ones. This thought also justified the transatlantic slave trade that brought millions of enslaved Africans to the Americas[109].

Samuël Coghe has a similar viewpoint and mentions that by the 19th century, Europeans believed that the dominant diseases in Africa were caused by the tropical climate and that Europeans arriving to the tropics were immensely vulnerable compared to the populations who had been living there all their life. This insight led to a racialized discourse of tropical diseases. The tropical regions of Africa were seen as extremely dangerous, the so-called "white man's grave"[110].

Bump and Aniebo mention this point as well, focusing on the European's fear of malaria. The Europeans became increasingly pessimistic about white populations being able to live in the tropics, which threatened their mission of conquest. Therefore, the main focus of colonial health services was the Europeans. Physicians published a number of recommendations for European settlers in the tropics, such as avoiding direct exposure to the sun, good diets, regular meals, living in well-aired houses and if possible, living far away from swamps, from local populations, and in higher altitudes[111]. The racial segregation reflected the self-interest of the Europeans concerning malaria. This focus on safety was only meant for the Europeans, while the safety of the local population was not considered. The knowledge on malaria was only used to benefit the Europeans and native huts, for example, were only sprayed if they were close to a European's home[112]. Bruchhausen adds that in larger cities, Europeans built hospitals only accessible for whites, while the hospitals for the coloured were built by locals. In smaller towns, white people usually slept in the hospital buildings while locals had to sleep in huts[113].

[109] Farmer et al., 2013: 36-38
[110] Coghe, 2020: 5
[111] Bump/Aniebo, 2022: 6; Coghe, 2020: 6-7
[112] Bump/Aniebo, 2022: 7
[113] Bruchhausen, 2020: 29

According to Coghe, the segregation of Africans and Europeans was not only due to medical reasons, as placing European residences in higher altitudes led to economic advantages, the showcasing of superiority, and the clear display of racial segregation[114].

Bump and Aniebo explain that colonialism was also responsible for worsening the spread of malaria. New dam projects led to the creation of new vector breeding sites, forced migration led to the spread of malaria, Africans were forced to live in places that they formerly avoided, and poverty increased the susceptibility to the disease[115].

While Zimmer and Packard focus strongly on the forceful introduction of health measures by the colonial powers, it makes it seem like health care did not exist in colonial populations prior to colonial health programs. Samuël Coghe sheds a different light on the situation and highlights the African therapeutic practices that existed before as well as during colonial rule. He focuses on Africa and explains that African populations had different healers and healing practices many centuries before colonialism. While European powers described African practices as "backward" and "unchanging", these healing practices in fact did change over time and incorporated new elements long before the invasion of colonial powers. Coghe takes the spread of Islam as an example, which led to new medical practices in African societies[116].

Coghe also mentions important cross-cultural exchanges of medical practices between Africans and Europeans. While Africans incorporated some European medical elements into their practices, it also went the other way. European settlers doubted their own healing methods against unknown tropical diseases and therefore valued the knowledge of local healers. They were often seen as more capable of curing tropical diseases than European physicians and therefore had a lot of freedom to practice their profession. Coghe claims that these cross-cultural exchanges were possible because the medical beliefs of Africans and Europeans from the 16th to the early 19th century were quite similar. Therefore, Europeans and Africans occasionally exchanged knowledge, medical substances, and practices[117].

However, not everyone was pleased with this knowledge exchange. While patients were exceedingly open about it, many European physicians as well as African healers were suspicious and convinced about their own superiority. Especially in the late 19th century, there was a shift in this knowledge exchange. As the conquest of Africa became more violent and the

[114] Coghe, 2020: 6-7
[115] Bump/Aniebo, 2022: 7
[116] Coghe, 2020: 2
[117] Coghe, 2020: 3

power relations even more asymmetrical, European powers were more convinced about their superiority in the medical field. Even though cross-cultural exchanges still took place, they were strongly limited compared to before. In addition, the rise of the golden age of bacteriology led to a change in beliefs and a divergence of African medical practices[118].

Walter Bruchhausen has a similar opinion and claims that even though European medicine had spread since the early modern period, the European belief of superiority concerning their medical practices had only occurred in the late 19th century with the golden age of bacteriology. He agrees with Coghe that African medical practices had even been seen as superior by European settlers, who eagerly let themselves be medically treated by local healers. He mentions that an abundance of medicinal plants was imported to Europe from the colonies. He claims that for a long period of time, international health care was only seen as an export of medicine when in reality, it was a transfer from both sides. He therefore counterbalances the Eurocentric perspective on international health interventions and emphasizes the power of the local populations[119].

Sunil Amrith adds an important point to this discussion. By examining the medical interventions of colonial authorities, it cannot be forgotten that interventions of the colonial state only took place when essential elements of colonial rule were threatened. He claims colonial states only launched health interventions when there were crises or emergencies, especially epidemic diseases. That is why the focus of most literature examining colonialism and medicine is on specific epidemics. Amrith describes colonial medicine as absent, neglectful, and weak, lacking resources, infrastructure, and personnel[120].

In this chapter, the origins of the postcolonial theories mentioned above can be observed in various situations. There are countless examples of Othering, due to the European's feeling of superiority and their attitude towards colonial populations, which they describe as "backward", "irrational", and "primitive". The concept of Provincializing Europe can also be observed when analysing the way in which the history of European conquest is told. Mostly, the focus is on Europeans catching diseases by "savage" colonial populations and trying to control these diseases in the best way possible. However, as some historians covered in this thesis have revealed, this went both ways, as the colonial powers brought many diseases with them with which they infected the colonial populations. Even though the theoretical focus of this thesis is

[118] Coghe, 2020: 4
[119] Bruchhausen, 2020: 2 and 5-6
[120] Amrith, 2006: 22

not on Homi Bhabha's concept of Hybridity, it is worth mentioning that it does appear in Samuel Cogues interpretation of the cross-cultural exchanges of medical practices.

3.2 The Emergence of Permanent Health Organizations

At the beginning of the 20th century, permanent health organisations were created and replaced the international conferences as an instrument of international cooperation[121]. During this time, the international health field was characterized by a significantly growing amount and scope of national, international, public, and private organizations[122]. The first permanent international health organizations were the International Office of Public Hygiene, also known by its French name Office International D'Hygiène Publique (OIHP) in Paris and the Pan American Sanitary Bureau (PASB) in Washington. These organizations were founded because the before dominating concept of conferences was extremely inefficient. It included a long negotiation process and an even longer ratification process. Both organizations had similar functions and were responsible for international rules concerning health. While the OIHP came to an end in 1950, the PASB was integrated into the newly founded WHO[123].

In the history of international health policy, the OIHP and PASB are seen as important milestones being the first permanent international health organizations, according to Zimmer. They institutionalized international cooperation, expanded the field of international health policy, and were the precursors to the WHO[124]. Besides the OIHP and PASB, the Rockefeller Foundation and the League of Nations Health Organization also played an important role in the international health field. This chapter goes into detail about these two organizations and their ties to colonial structures.

3.2.1 The Rockefeller Foundation

Zimmer claims that in past as well as present literature, the Rockefeller Foundation is presented as extremely successful and as globally the most important institution in the field of public health of the first half of the 20th century[125]. Randall Packard also describes the International Health Division of the Rockefeller Foundation as the most significant and influential international health organization until the mid-20th century. Before pulling back from the health sector, it had been active in 80 countries fighting various diseases, built schools of tropical

[121] Zimmer, 2017: 33
[122] Amrith, 2006: 5
[123] Zimmer, 2017: 35-37
[124] Zimmer, 2017: 37-38
[125] Zimmer, 2017: 49

medicine and public health, and trained a number of health professionals from developing countries[126].

In the first half of the 20th century, the Rockefeller Foundation was not only fighting diseases. It was also active in biomedical research, focusing on finding a vaccine against yellow fever. Concerning the history of international health policy, however, it is mostly known for its eradication campaigns, since they had an important impact on further developments in this field[127].

The international activity of the foundation was an extension of its health activities in the US. In 1909, the Rockefeller Sanitary Commission for the Eradication of Hookworm Disease was organized. Zimmer explains that besides wanting to improve the health of the American population, it also wanted to improve its own image with this project. Hookworm was mostly a problem in some Southern states of the US and was the perfect starting point for the Rockefeller Foundation. The infection was easy to identify, and it was easily curable. This campaign should demonstrate the abilities of modern medicine and initiate the creation of professional health care. In 1913, the International Health Division of the Rockefeller Foundation (IHD) was founded in order to expand its activities internationally. First, the campaigns targeted hookworm in several countries of Central and South America as well as Southeast Asia[128].

Zimmer claims that the international expansion of the Rockefeller Foundation's campaigns was preventative action and self-protection. Since the Spanish-American War, the fear of tropical diseases increased in the US, and it skyrocketed with the opening of the Panama Canal in 1914. Ships from areas with large numbers of malaria and yellow fever cases had a much faster route to the US. Therefore, the Rockefeller Foundation decided to take on malaria and yellow fever, prioritizing yellow fever until the mid-1930s. Hence, the driving force of the shifted focus to yellow fever and malaria was again self-protection of the US population[129].

Zimmer describes that the focus on yellow fever and malaria also shifted the goals of the campaigns in the 1920s. Instead of focusing on creating professional health care systems, the focus shifted to fighting diseases with the goal of self-protection. The IHD used their resources to fight against mosquitoes and had campaigns in various parts of the globe. Fighting malaria

[126] Packard, 2016: 32
[127] Zimmer, 2017: 54
[128] Zimmer, 2017: 50-51
[129] Zimmer, 2017: 51

was seen as extremely complicated at the beginning of the 20th century, since there were various types of Anopheles mosquitoes, and the disease was spreading mostly in remote rural areas. However, the Rockefeller Foundation was successful in many areas, for example in Brazil, where it was able to fully eradicate the disease[130].

The Rockefeller Foundation was fighting infectious diseases at their place of origin in order to protect the US-American population. Therefore, Zimmer describes it more as an American project instead of a project of global cooperation. The focus was on biomedical research, while social and economic factors were only in the background. Zimmer explains that the campaigns were always managed and planned by experts of the Rockefeller Foundation, while the countries in which the campaigns were carried out provided the manpower[131].

Packard adds to Zimmer's argument and states that the motives of the Rockefeller Foundation were not just out of financial interest or improving tropical labour. He explains that in the records of the IHD, improving the health of Southern populations was described as a civilizing mission. Packard claims Rockefeller wanted to sanitize the world and spread the standards of Western civilization. Rockefeller did not mind increasing his wealth in the process, but Packard thinks it was not the main purpose of his interventions in international health[132].

Packard agrees with Zimmer that hookworm was chosen in order to show the success of biomedicine in international health efforts. He claims there was no interest to eliminate the underlying cause of hookworm or of other diseases. Farmer and his colleagues further strengthen this argument and claim that records from the 1930s of the Rockefeller Foundation show that addressing other diseases that were caused by socioeconomic conditions was avoided on purpose. They use tuberculosis as an example, which was linked to poverty and other socioeconomic factors[133].

Furthermore, Farmer and his colleagues heavily criticize the colonial impact as well as the spread of colonial knowledge frameworks of health interventions by both the PAHO and the Rockefeller Foundation. They explain that in the 20th century, the Rockefeller Foundation's goal was to modernize non-Western and, in their eyes, "backward" and "traditional" populations. The focus was hereby on technical interventions like vector control in the course

[130] Zimmer, 2017: 51 and 53
[131] Zimmer, 2017: 54
[132] Packard, 2016: 33
[133] Farmer et al., 2013: 59

of mass disease-eradication campaigns. Even though many of these campaigns were successful, they were based on a narrow view of international health[134].

Randall Packard also explains that the hookworm campaign had a deep entanglement with colonial medicine as many directors from Panama and the Philippines were employed by the IHD. Practices that were developed in American colonies therefore had a large impact on the early hookworm campaigns of the IHD[135]. While Zimmer does mention the self-interest of the US as the primary reason for their interventions and classifies them as top-down approaches, Packard goes more into detail about the colonial entanglements of the campaigns of the Rockefeller Foundation's IHD.

Packard describes that carrying out the hookworm campaign in the British colonial empire increased the colonial impact on it. The British colonial officials were being convinced of the Rockefeller Foundation's work which was known as the American, or intensive, method. In order to eradicate hookworm, the stools of large populations were tested, and infected people were given worming medicine, which was highly toxic. The treatment was painful for the patients and a number of people died from it. Since the British colonial authorities were in line with the IHD, there was no need for local cooperation. As the campaign was expanding to other countries without colonial rule, local cooperation became more of a challenge. Without colonial control, the IHD had to communicate with the locals on a different level and adapt to local conditions. There were different ways in which the hookworm campaign was carried out depending on the form of colonial control. However, Packard notes that the campaign still had the basic components of the American method that had been created in the American colonies[136].

Packard points out that the IHD used its hookworm campaigns to enter communities and introduce Western science and hygienic standards. However, sanitary activities such as getting people to use latrines, wearing shoes, and improving the overall sanitation, were mostly in the background of the campaigns. Packard explains that was the case because sanitary activities needed time and money. Also, the people in charge of the campaigns believed in the power of biomedicine. Another reason why sanitation efforts were not successful was because of the lack of communication and understanding of local populations and their living conditions. For example, while US health officials in Mexico believed people not wearing shoes was a problem

[134] Farmer et al., 2013: 59
[135] Packard, 2016: 33
[136] Packard, 2016: 35

of behaviour and intelligence, most people simply could not afford shoes. In Costa Rica, the local population rejected latrines because they attracted mosquitoes, which led to an increase in malaria[137]. Healing infected people had an immediate effect, whereas sanitary efforts would have required much more time and effort. Packard explains in his book:

"The desire to have a rapid impact, a lack of understanding of local social and economic conditions, and the absence of followup surveys to measure outcomes would become enduring characteristics of international- and global-health campaigns"[138].

Packard mentions an important individual in hookworm control, Samuel Taylor Darling. Darling was a British colonial official who further developed the treatment of hookworm disease by introducing the concept of mass treatment. Packard explains that Darling developed the concept of mass treatment because of his negative view of the Tamil workers. He described them as "superstitious", "ignorant", "unstable", "servile", and "incapable" of following sanitary practices. In his report, he did not mention the lack of basic sanitation and the poor housing and working conditions on the plantations[139].

Darling and his colleague Barber also tested the effectiveness of a variety of drugs against hookworm by using subjects from hospitals and jails. It was difficult to find subjects because of the aftereffects of the drugs. Many subjects complained of dizziness, the inability to rise, unsteadiness, tingling in hands and feet, deafness, or a burning in the stomach. Even though the side effects mostly originated from the oil of Chenopodium, Darling and Barber still recommended this toxic drug describing it as most effective for removing worms[140].

The IHD was not successful in eradicating hookworm because of its focus on treatment instead of prevention. Without effective sanitary standards, reinfections could not be prevented. The IHD therefore decided to end its hookworm campaigns in the 1920s and instead focused on eradicating yellow fever. However, the approach of mass treatment influenced other campaigns around the world and Darling later became a member of the League of Nations Malaria Commission as one of the US colonial health officials who got employed by an international health organization[141].

[137] Packard, 2016: 34-36
[138] Packard, 2016: 36
[139] Packard, 2016: 37
[140] Packard, 2016: 38
[141] Packard, 2016: 39

Packard states that the yellow fever campaign of the IHD also had strong colonial connections. William Gorgas was employed by the Rockefeller Foundation to lead the yellow fever eradication campaign with the strategy he developed in Panama and Havana, and he had other former colonial officials assisting him. Taking the campaign in Peru as an example, Henry Hanson, who worked in Panama before, was leading the campaign. His methods were also described as top-down approaches without any efforts for local cooperation and education. In his opinion, the local population was "scientifically backward", "superstitious", "ignorant", "resentful", and "unable" to understand basic knowledge. He was not the only one with this mindset, as many other colonial officials working in hookworm campaigns in the Caribbean, Latin America, Africa, and Asia, shared his view. His yellow fever campaign was successful[142].

In addition to disease elimination campaigns, the Rockefeller Foundation focused strongly on building schools of public health, for example the Johns Hopkins School of Hygiene and Public Health and Harvard's Public Health School. At the schools and training sites of the Rockefeller Foundation, the strategies of disease control from Gorgas and other American physicians were passed on to later generations of US health officials as well as to individuals from other countries. Therefore, disease control strategies that were developed in colonial settings were connected with and became a part of the science of hygiene. They became central practices of international health. These schools and training sites of the Rockefeller Foundation increased the connection of colonial medicine and early international health organizations. Many health officials were trained in these schools, which led to a community of international health professionals sharing a common view of international health[143].

The schools had their focus on scientific approaches of disease control, while they had little information on working with local populations. C.C. Chen and Selskar Gunn, who studied public health at Harvard's Public Health School in the early 1930s, claimed they learned nothing valuable at Harvard and later went on to create projects that were community based. Only in the 1950s, the focus in schools of public health shifted to social sciences[144].

Randall Packard also examines the career of Paul Russell, who worked in a malaria control program in the Philippines in the 1920s. The hookworm campaigns in the Philippines by the IHD were not successful due to the *"defecation habits of the population, lack of initiative and unsuitability of Filipino workers"*[145]. Hookworm campaigns were abandoned, and malaria took

[142] Packard, 2016: 39-41
[143] Packard, 2016: 32 and 41-43
[144] Packard, 2016: 42
[145] Packard, 2016: 44

its place in the 1920s. Malaria has been a burden to American soldiers and administrators since the beginning of the US occupation[146].

There had been problems in malaria control in the Philippines due to the unwillingness of the Filipino population to participate in the control measures such as using mosquito nets or taking quinine tablets. That is why in the 1920s, the IHD focused on eliminating mosquitoes and their breeding sites instead. However, these methods were not successful. Paul Russell, who arrived in the Philippines in 1929, had a different approach. Besides using quinine, netting, and education, he proposed an approach including more community participation. He believed it was important that malaria control would be desired and carried out by the local population. Russell's belief was part of a growing mindset in international health programs that occurred in the 1930s[147].

However, his malaria control activities did not reflect this belief. In the end, he had the same thoughts of the Filipino population like other American officials. Due to the population being "incapable" and "not trustworthy", larval control was seen as the only efficient way to eliminate malaria. Even though his campaign was better organized than past activities, it still was a top-down approach[148].

Packard says that hookworm campaigns were present in many areas of the world such as Latin America, China, and South and Southeast Asia. These campaigns led to the colonial disease campaign being the centre piece of international health[149]. Thomas Zimmer has the same viewpoint and claims that in the next decades, the strategies of the Rockefeller Foundation were the dominant model for international health interventions[150].

Furthermore, he points out that in the 1940s, the international environment changed drastically. In 1951, the Rockefeller Foundation pulled back from international health interventions and had other goals, mostly fighting overpopulation. Also, it was thought that the WHO was more suitable to tackle the new, global challenges after the Second World War[151].

All in all, the campaigns of the Rockefeller Foundation carried the colonial knowledge framework into the international health field. It acted out of self-interests and self-protection due to the United States' increased fear of tropical diseases. It had a narrow view of health by

[146] Packard, 2016: 44
[147] Packard, 2016: 47
[148] Packard, 2016: 47
[149] Packard, 2016: 39
[150] Zimmer, 2017: 54
[151] Zimmer, 2017: 54

focusing on the biomedical perspective on health, avoiding social and economic factors. This fits well into the concept of Provincializing Europe, as the Rockefeller Foundation was convinced about its own, superior scientific knowledge, while local knowledge was disregarded. There are also many examples of Othering in the campaigns of the Rockefeller Foundation, such as the need to "modernize" local populations, which on many occasions were described as "backward", "ignorant", "incapable", and "not trustworthy".

The Rockefeller Foundation had deep entanglements with colonial medicine, as it worked together with colonial powers such as the British, while encouraging questionable treatments which were carried out against the local population's will and resulted in many deaths. Many campaigns of the Rockefeller Foundation were led and/or assisted by colonial officials, who embraced top-down strategies and showed no effort in local cooperation, as local populations were seen as inferior. Disease control was favoured over broader-based approaches to health, as they had immediate effects and there was no need for understanding and working together with the local populations. On top of that, it built public health schools in which this colonial body of knowledge was passed on to many people working in the international health field.

3.2.2 The League of Nations

The League of Nations was founded in the interwar period. Thomas Zimmer explains that the League of Nations was mostly depicted negatively in historical research as well as in the collective memory of Europeans and US-Americans. The main reason for that was that it was founded to maintain peace but could not prevent the Second World War. However, in recent times there has been a different viewpoint on the League of Nations. Even though it was not able to keep the peace, it was innovative on a technical scale. The League of Nations was able to work with the US and therefore achieve a global reach, it was the first organization to use technical experts and international civil servants, and it is seen as a precursor for many of the international organizations that followed[152].

The League of Nations Health Organization (LNHO) was founded at the beginning of the 1920s due to various epidemics in Europe. It was led by the Polish physician and bacteriologist Ludwik Rajchman and extended the scale of international health activities[153]. Zimmer and Packard both mention Rajchman as an important individual in the field at that time, Packard

[152] Zimmer, 2017: 39
[153] Amrith, 2006: 6

explaining that he combined the knowledge of his medical background of bacteriology with his socialist principles[154].

Zimmer goes into detail about the broad scope of work of the LNHO, which included tasks like collecting epidemiological information, conducting studies about various diseases, creating commissions of experts for different diseases, and organizing international exchange programs[155]. On top of these diverse functions, Sunil Amrith adds that the League was also directly involved in colonial topics. After the First World War was over, the League created the mandate system, which meant that the colonial territories of the Ottoman and German empire were assigned to the winning allied powers as mandates. Amrith and Zimmer both mention that the League of Nations developed the idea of a non-political cooperation by using independent experts instead of government officials, which is seen as a defining feature. This enabled the participation of the US, even though it was never a member of the League of Nations[156].

The LNHO was the first organization that, theoretically, had global responsibilities and agency. It collected epidemiological information about the health status of many world regions and was starting to develop a global view of health. However, Zimmer notes that it was still mostly a regional, European organization. The League of Nations Health Organization therefore made various innovate changes, even though they were not successful in practice. The organization sustainably extended the ideas and concept of international health policy. Another important point was the organizational structure of the League of Nations, which was used as a model for the WHO[157].

Due to the global economic crisis, the budget of the League of Nations was significantly cut. The organization was officially operating until 1946[158].

Packard brings in some aspects concerning the LNHO and its limitations. The LNHO was primarily concerned with the health of European populations, but also expressed its responsibility to improve the health of the world population. However, attempts to extend its activities to other continents were often refused by either European colonial authorities, or other international organizations such as the Rockefeller Foundation, and by the US in general. In addition, it was not clear to which extent it should tackle social and economic issues. Also, there

[154] Packard, 2016: 54-56; Zimmer, 2017: 46
[155] Zimmer, 2017: 41-42
[156] Amrith, 2006: 6; Zimmer, 2017: 45-46
[157] Zimmer, 2017: 43-46
[158] Zimmer, 2017: 43

were discussions about whose interests it should represent, the ones of the member states or the ones of global health needs[159].

Randall Packard as well as Paul Farmer and his colleagues highlight an important point that cannot be found this directly in Zimmer's writings. Packard claims that for the League of Nations, maintaining peace also meant improving social and economic factors of the world population[160]. However, Packard and Farmer both point out that since the LNHO was underfunded, one third of its budget came from the Rockefeller Foundation, which was the largest funder of international health activities at the time. Thus, the LNHO tended to operate in favour of the Rockefeller Foundation and its narrow, biomedical view of health. The LNHO and IHD had similar health interventions and overlapping personnel[161].

Sunil Amrith agrees with Packard and Farmer et al. about the close financial, intellectual, and institutional relationship of the LNHO and the Rockefeller Foundation. However, he points out that in recent historical work, there is more focus on the Rockefeller Foundation's positive achievements, such as its activities that were adapted by local actors, the relative autonomy of its scientific networks as well as its created networks which crossed national and institutional borders[162].

In contrast to Zimmer, Farmer and his colleagues only briefly mention the PAHO, OIHP, and LNHO. While they categorize the PAHO as the first permanent health institution as well as the oldest international public health institution, they mention the weaknesses of the two other organizations. The OIHP and LNHO both did not manage to become universally relevant and they describe its goals as *"overly optimistic prescriptions for global democracy"*[163].

They also state that these new international organizations created a sense of authority and stability in the international health sector, which increased the efficiency and geographical scope of the international health field. However, they also add that the institutionalization of international health through permanent organizations led to the belief that their rules and processes were superior to local practices. They furthermore mention that while those new organizations provided more power, effectiveness, and a broader reach, they also faced limitations due to applying their one-size-fits-all techniques[164].

[159] Packard, 2016: 51-52
[160] Packard, 2016: 51
[161] Packard, 2016: 54; Farmer et al., 2013: 56
[162] Amrith, 2006: 7
[163] Farmer et al., 2013: 56
[164] Farmer et al., 2013: 58

3.3 A Shift in International Health Interventions in the 1930s

Randall Packard mentions a shift in international health policies in the 1930s with increased discussions about narrow technical interventions on the one side, and a broader vision of health on the other side[165]. Zimmer and Amrith speak of the same shift in their writings, explaining the rising importance of social and economic determinants of health. This view was prominent in the middle of the 19th century before the golden age of bacteriology. Zimmer, Amrith, and Packard conclude that the global economic crisis led to a change of thinking and consequently to the recurring rise of social medicine in the 1930s and 1940s[166]. According to Packard and Amrith, reason for that was that the Great Depression resulted in millions of people ending up in poverty and therefore it clearly showed a connection between health and economy. The focus shifted to living and working conditions, nutrition, agricultural production, economy, as well as developing well-functioning health care systems[167].

Zimmer explains there was a lot of worry in Europe about the demographic development of their own populations. Public health was therefore of significant importance and most European states introduced or improved their national health systems. In relation to that, there was also increased attention on international cooperation[168]. The growing poverty in Europe also had a tremendous impact on colonial populations, which showed the effects of a global economy. The Great Depression consequently led to increased malnutrition and disease in colonial populations. The health of rural populations in Europe as well as across the world therefore became a central part of the LNHO's new approach[169]. Besides that, the LNHO also focused more on nutrition, since there was new knowledge on the effects and benefits of vitamins[170]. It was known that good nutrition was beneficial for the health of people and the LNHO called attention to the malnutrition of colonial populations in several reports[171].

This shift to a broader based approach can be seen in the Pan African conferences, mentioned by Packard. In 1932 and 1935, the first two Pan African conferences were taking place in South Africa. African colonial officials as well as representatives of international organizations like the League of Nations, the Rockefeller Foundation, and the International Office of Public Health, were taking part in the conferences. These conferences stressed the importance of local

[165] Packard, 2016: 55
[166] Amrith, 2006: 6; Packard, 2016: 49; Zimmer, 2017: 47
[167] Amrith, 2006: 27; Packard, 2016: 56-57
[168] Zimmer, 2017: 48
[169] Packard, 2016: 59-60
[170] Amrith, 2006: 28
[171] Packard, 2016: 62-64

cooperation and a broad-based approach to health which was connected to improving the economic development of the African population[172].

The vision of health of these conferences therefore was different than the one described before. Instead of the military-style disease campaigns in the 1910s and 1920s, a broader approach to health with a wider range of actors was discussed, focusing more on the social determinants of health. This mindset started in the late 1920s during the rise of social medicine in Europe. It led to a better understanding of social and economic factors on health and mentioned the importance of universal health care systems. Especially during the Great Depression in the early 1930s, this broader approach to health took centre stage[173].

Packard claims this shift in perspective can be seen in the LNHO's activities in the fields of malaria, rural hygiene, and nutrition. In the first report of the LNHO's Malaria Commission in 1924, the focus had already been on combining the use of quinine with increasing the quality of housing, education, nutrition, and agriculture. The focus was more on the hygienic and social conditions of the population. Packard and Amrith both mention that due to the Great Depression, the LNHO pursued this broader approach more seriously and directly. Ludwik Rajchman, the director of the LNHO, had an increased motivation to actively address broader socio-economic issues. Health was connected to a broader spectrum of social and economic problems[174].

There have been several initiatives by the LNHO to improve rural hygiene and nutrition in Europe as well as internationally during the 1930s. The Rockefeller Foundation also had interventions in different parts of the world in order to improve sanitation and rural hygiene. Packard describes these activities in the interwar period as a break from previous disease campaigns. However, certain former attitudes and practices remained, as well as the tension between technical and broad-based approaches[175].

An example of a broader based approach can be found in the LNHO's interventions in China. Rajchman viewed China as equal and spoke of technical collaboration rather than technical assistance. This viewpoint was not shared by everyone, for example by the French and British who had a more paternalistic mindset. There was even opposition by some colonial officers working for Rajchman's projects in China, for example William Campbell. He was a British

[172] Packard, 2016: 49
[173] Packard, 2016: 49
[174] Amrith, 2006: 27; Packard, 2016: 57-59
[175] Packard, 2016: 66

colonial officer leading an agricultural project in China while he had no experience working in the country. He did not see that as a problem, however, since he was convinced of his technical expertise. He had a different view than Rajchman and described the local population as "incapable". At the same time, he criticized the political motivation of China to build their own cooperatives. This lack of appreciation for local motivations in development projects was prominent in the mindset of international health experts over the next half of the century[176].

Packard and Amrith both mention Andrija Stampar, who was also a health expert employed in China. He shared Rajchman's view and explained, for example, that it was irrational to distribute medication when people were in need of food. He also advocated for improving the living and working conditions of the population, as well as its level of education. Additionally, he explained that the cooperation of the population is central for public health interventions to be successful[177].

Even though the League of Nations was not able to achieve the desired outcomes in China due to the Chinese government's own opinion on certain projects as well as the Japanese invasion in 1937, it was an important milestone in international health interventions. It highlighted the need to work cooperatively with local populations and governments. Packard claims it shows a clear distinction from colonial health interventions, even though some earlier attitudes were still present in the opinions of some experts. Packard describes the LNHO's interventions in China as part of the large shift during the 1930s, which also influenced the Rockefeller Foundation's programs[178].

The Rockefeller Foundation had already been present in China before the First World War. However, its program in the 1930s followed a much broader vision of health under Selskar Gunn. Gunn did not have a narrow, biomedical view of health and focused more on social sciences. China was seen as the perfect laboratory by the Rockefeller Foundation, since it was not under European rule. The Rockefeller Foundation had the mindset that it could shape and change the world in whatever way it wanted, especially without the influence of colonial rule. However, this view was far from reality as they soon realized due to China's own political interests as well as the outbreak of the Sino-Japanese War in 1937[179].

[176] Packard, 2016: 67-69
[177] Amrith, 2006: 27; Packard, 2016: 69
[178] Packard, 2016: 70-71
[179] Packard, 2016: 71-73

Packard and Amrith both use John Hydrick, an officer of the Rockefeller Foundation, as an example of including local expertise into the global health discourse. In Java, John Hydrick used local health educators, called mantris, to encourage the population to participate in rural hygiene measures by including them in the process of building latrines, for example. The local educators were used to teach simple hygiene techniques to children, such as making toothbrushes, drinking from individual cups, and washing their hands. The goal was to create an interest and permanent habits concerning hygiene in the population. Hydrick explained that the use of coercion would be a successful measure, however, it would be far too expensive to hire a large amount of personnel and to enforce rules upon the population. Therefore, Hydrick highlighted the importance of the persuasion of the people through mantris[180].

The IHD claims it was successful in changing the health behaviours of the village they were working in. However, Packard points out that in anthropologist Eric Stein's recent writings, he interviewed participants of the program and came to the conclusion that it still contained elements of a top-down approach. He explains the local villagers were mostly elites, who had been used by Dutch colonial forces before. The motivation of the villagers therefore stemmed from the power of local authority from the elites. Hence, it can be said that the program was different from earlier interventions because it focused more on improving basic health services and incorporated local people into the program. Yet, it still did not address the underlying factors of the health problems and focused more on scientific hygiene of the West. The cultural views of the local population were not taken into account[181].

In this context, Amrith and Packard mention the Bandoeng Conference of 1937 which was organized by the League of Nations' Far Eastern Bureau in Singapore. Almost all countries invited were European colonies, which meant most of the representatives were European colonial officials. China, Japan, and Siam were the only independent countries taking part in the conference at the time. Representatives of international organizations, like the LNHO and the Rockefeller Foundation, also took part in the conference[182]. Amrith explains that this conference was the first formal international discussion about health in Asia. There was critique on coercive vaccinations, the lack of curative medicine and, most of all, on the fundamental issue of poverty. Besides nutrition, malaria was an important problem too. It was recognized that malaria is not only a health problem, but also a social problem and must be treated as such. Besides preventative campaigns, there also needed to be a focus on fighting poverty and

[180] Amrith, 2006: 29-31; Packard, 2016: 78-79
[181] Packard, 2016: 78-79
[182] Packard, 2016: 85-86

improving nutrition. These were perspectives of scientists who were thinking critically about the colonial state and economy[183].

However, Amrith explains that the views of these scientists were mostly overshadowed by the views of the colonial states. Since they grew more aware of the complexity of the health of local populations, they were searching for quick, cheap solutions, for example mass distributions of quinine. Because they were on a tight budget, attacking broader social and economic determinants of health was not realistic. Instead, they highlighted the importance of disease campaigns. Therefore, some pledged for widespread social, cultural, and economic transformations and even restricting colonial capitalism in order to improve public health, while others saw public health as cheap and widespread interventions in order to improve economic efficiency. For example, Amrith states that the colonial state even went so far as to let prisoners manufacture quinine tablets for their Asian colonies in order to save costs[184].

Concerning the Bandoeng conference, Packard explains that its structure as well as the dominance of European colonial authorities showed the continuation of the connection between colonial medicine and international health organizations. He explains that social and economic issues were discussed, but no radical changes were put into place. In addition to that, the consequences of colonial economic policies were not criticized at all. Even though local participation was deemed as an important matter, it was always followed by the need to supervise local activities by outside experts. Furthermore, there were no recommendations about the implementation of the discussed reforms, which is not surprising since it would have been an inconvenience for the colonial officials who controlled the meeting[185].

All in all, Packard explains that in the 1930s, it was attempted to find balance between scientific knowledge and a broader approach to health by providing scientific nutritional information while also increasing the availability of food for all sectors of society. However, it was up to each nation to introduce policies. In addition, the need for broader social and economic interventions was recognized, but most recommendations still focused on technical solutions[186].

Therefore, even though new approaches to international health emerged in the 1930s, these new ideas were not put into practice and mostly remained theoretical visions. During this time, military-style disease campaigns by international organizations like the Rockefeller Foundation

[183] Amrith, 2006: 38-40
[184] Amrith, 2006: 41-42
[185] Packard, 2016: 84-86
[186] Packard, 2016: 64-65

continued to play an important role in the international health field. Hence, Packard argues that earlier approaches to public health were not replaced by new visions. Instead, the approaches to public health were expanded and multiplied[187]. Zimmer agrees and states that global health policy did not have a continuous, linear history. It consisted of various strands that were developing parallel to each other, but also at different times[188].

Farmer and his colleagues agree too, as they mention a successful delousing campaign in Peru in 1946 at a conference of the PAHO as an example. It was described as successful because the local population was involved, and local context was considered. However, they describe it as an isolated incident rather than a common practice of the health sector at the time[189].

In conclusion, it can be said that there was a shift to broader-based approaches to health in the 1930s. The LNHO, for example, had Ludwik Rajchman as its president who had a socialist approach and put more emphasis on local cooperation. However, there were different opinions about which approach was better and the way in which campaigns were carried out strongly depended on who was leading them. As can be seen with the Bandoeng conference, there were discussions about broadening health interventions and incorporating local populations into the process. However, colonial states mostly overshadowed this debate and rather wanted cheap, quick solutions for the health problems in their colonies. Furthermore, the colonial structure itself was not criticized and there were no recommendations about the implementation of these theoretic visions. Local populations were still seen as inferior, believing that if they were to take part in the campaigns, they would need constant supervision as they were deemed as “not trustworthy”.

[187] Packard, 2016: 49
[188] Zimmer, 2017: 55
[189] Farmer et al., 2013: 59

4 Analysis of Colonial Continuities in the Malaria Eradication Programme

This chapter focuses on the analysis of colonial legacies in the WHO's Malaria Eradication Programme of the 1950s. At first, the founding of the WHO as well as the reasons for its return to disease elimination programs are explained. After that, the Malaria Eradication Programme is described and colonial continuities in its planning and strategy are analysed. This is followed by the analysis of the continuation of colonial structures in the concrete implementation of the program. Throughout this chapter, connections are made to the colonial origins of health interventions covered in chapter 3.

4.1 The Founding of the WHO after the Second World War

In 1946, the constitution for a new international health organization was discussed in the course of an international health conference, in which representatives of 51 member states of the United Nations, 13 non-member states and representatives of 10 other organizations connected to health came together. This new organization, the WHO, was supposed to replace the LNHO and succeed in the areas in which the LNHO had failed. Packard mentions that the goals shared in this constitution strongly resembled the vision of health of the 1930s. It was believed that a broader approach, in which underlying social and economic determinants to health were addressed, was necessary[190]. Amrith agrees and adds that most endemic diseases were described to have social causes and therefore, broad-based approaches to health were desired[191]. The WHO was officially established on the 7th of April in 1948. Brock Chisholm, the first director general of the WHO, also strongly believed in the importance of social and economic determinants of health as well as in the establishment of health services[192].

If the need for a broader-based approach to health was desired and deemed necessary, why did disease eradication campaigns end up gaining the upper hand in the 1950s? A number of historians have dealt with this question, which is discussed below.

4.1.1 A New World Order

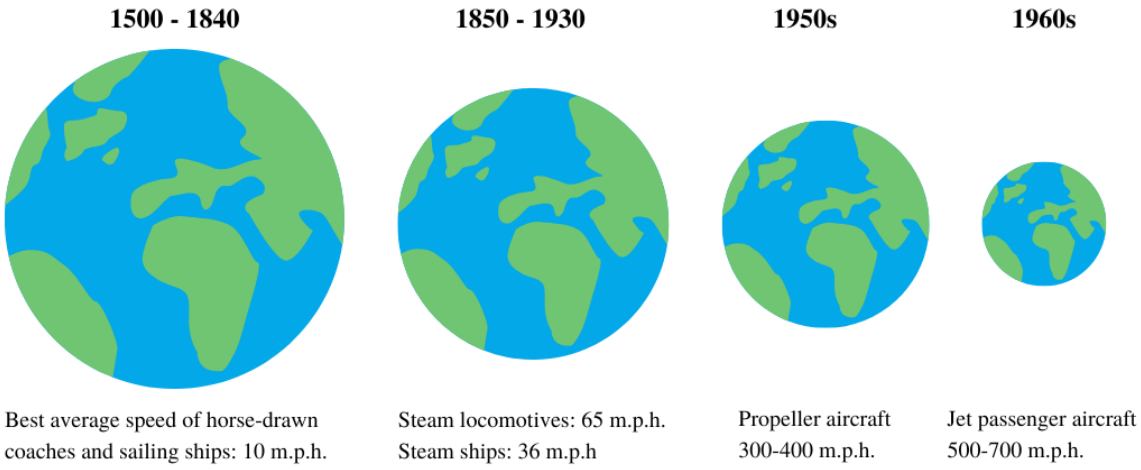
There is a general consensus among the historians covered in this thesis that the Second World War was a turning point in the history of public health. Amrith explains it as a fundamental

[190] Amrith, 2006: 75; Farmer et al., 2013: 62; Packard, 2016: 89
[191] Amrith, 2006: 78
[192] Farmer et al., 2013: 62; Packard, 2016: 101

paradigm shift that changed the way in which public health was dealt with[193]. Other historians, like Thomas Zimmer, go more into detail about the reasons for this changed mindset.

Zimmer claims that after the Second World War, there was a common mindset of creating a new world order. This was due to new problems and challenges arising from the increasing interdependence of nations. New means of transport, such as airplanes, resulted in a much quicker and wider spread of diseases. It was believed that no nation could protect itself alone, instead, an international organization with global reach was necessary to tackle these new risks. These thoughts had already existed before 1945 and during the war, however, after the war they gained increased significance. Due to the increase of speed in travel and communication, it seemed like the world was getting smaller. This term of a "shrinking world" was used as a recurring theme by many health officials during that time[194]. It is illustrated in figure 3, which shows the map of a shrinking world, inspired by David Harvey from his book *The Condition of Postmodernity*, published in 1989.

Figure 3: A Shrinking World



Inspired by: Harvey, 1989, as cited in Nunns, 2015

The result of this "shrinking world" was an unprecedented level of global interconnectedness, which in turn led to an increased fear of the fast spread of diseases around the globe. Wilbur Sawyer, for example, explained how a person infected with yellow fever could travel from Africa to India before they even feel any symptoms of the disease, which could lead to an epidemic outbreak in India. These new risks especially affected nations which were strongly

[193] Amrith, 2006: 47
[194] Zimmer, 2017: 91-92

involved in worldwide transport and communication flows. Therefore, industrial countries had an extremely high risk compared to secluded regions of the world[195].

In the field of health, these thoughts of global interconnectedness led to the belief that the health of an individual was now connected with the health of all inhabitants of the world. It was therefore necessary to establish an international organization which had a global reach, with the goal of improving the health of all peoples of the world. This idea of a collective state of health was known under the term "world health"[196]. Due to the global era, it was now necessary for nations to not only arrange themselves with neighbouring regions, but with all inhabitants of the planet. The goal was to educate the coming generations and make them so-called "world citizens". As "world citizens", they would be able to live in this changing, globalized world and work together with all citizens of the rest of the world[197].

With the concept of "world health", quarantine measures were put more and more into the background. Due to modern transportation possibilities, it was thought to be impossible to put quarantine measures into practice and it was not reasonable anyway, since the health of people in quarantine zones was connected to the health of all others. It was not up to date anymore to divide the world into "healthy" and "sick" regions since the world was seen as one[198].

At that time, around 1945 and 1946, the global health field was dominated by utopian goals. It was believed that only eliminating diseases at their source could provide successful outcomes. The new "world health" policy should therefore focus on eradicating diseases worldwide and establish stable health care systems with the goal of a world without diseases. It was desired to not just improve the collective status of health, but to "reach world health". This period of time was characterized by big visions and goals for the new health organization, which should not have any limits in its actions[199].

There were mainly three important elements of this new "world health" policy. The first was universality, which meant all nations of the planet should be part of the new organization. The goal was to overcome national borders and fight diseases globally. This universality together with its decentralized structure was the difference to its predecessors. The second element was its non-political character. The new organization should be led by independent, non-political

[195] Zimmer, 2017: 93-94
[196] Zimmer, 2017: 94-95
[197] Zimmer, 2017: 122-123
[198] Zimmer, 2017: 95
[199] Zimmer, 2017: 98

experts and its actions should be strictly distanced from political aspirations[200]. The last element was to fight diseases at their place of origin, which should be done in two ways. On the one hand, efficient health authorities and health systems should be established and supported, and on the other hand, new technical "wonder weapons" like DDT should be applied extensively[201].

Zimmer claims that even though the constitution of the WHO did not end up being as radical and utopian as the discourse of that time, it did include major elements of the "world health" philosophy[202]. This can be seen in the definition of health, which was worded as follows: *"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"*[203]. The goal was to enable the highest attainable standard of health for all peoples. Unequal development of health between countries was seen as a danger for all. Therefore, the WHO was intended to be open to all states[204].

According to Zimmer, the constitution of the WHO is seen as a breakthrough because of the idea of "world health". The approaches in improving health were no longer oriented towards specific nations or regions, but towards the whole world. In addition, the WHO was the first international organization to focus on and coordinate "world health". In the time directly after the war, the topic of health was more in the centre of diplomatic activities and public awareness than ever before and seldom thereafter. It can be seen as a unique moment in the history of the 20th century, in which utopian goals of improving "world health" were in the centre of attention[205].

There were plans to eliminate certain diseases, as well as to improve nutrition, living conditions, sanitary facilities, working conditions and mental health. Therefore, the constitution clearly contained elements of social medicine and for the first time in history, health was defined by an international organization. Another ground-breaking innovation of the WHO-constitution was the definition of health as a fundamental right of every human being[206].

However, even though the member states agreed upon the guidelines, they did not agree about the concrete implementation. When the euphoric thinking of the years of 1945 and 1946 decreased in 1947, there were countless discussions about the implementation of the constitution. Topics of the discussions were the autonomy of the regional offices, the "non-

[200] Farmer et al., 2013: 62; Zimmer, 2017: 99
[201] Zimmer, 2017: 100
[202] Zimmer, 2017: 107
[203] WHO, 1946: 1
[204] Zimmer, 2017: 108
[205] Zimmer, 2017: 111-112
[206] Zimmer, 2017: 109

political" experts, the possibility of an enforceable right of health, and whether to include the losing side of the Second World War. In addition, there were discussions about the right approach in improving "world health". There were approaches inspired by social medicine on the one side, and approaches with the goal of eradicating certain diseases on the other hand[207].

In conclusion, the time period after the Second World War was characterized by optimistic, utopian ideas on the one hand and apocalyptic fears on the other hand, both phenomena intertwined with each other. There were optimistic hopes due to the new "wonder weapons", as well as technical and medical advancements. However, in the global era it was much easier for diseases to spread, which resulted in fears of catastrophic endemics. According to Zimmer, the utopian visions of "world health" and "world citizens" were mostly not due to naïve thinking, but the feeling of the need for radical changes due to the alarming change of the global environment[208].

There were also discussions about the joining of the United States. When the time came for the US to join the WHO, it hesitated due to various reasons, such as its distrust in working together with the Soviet Union, not having more power than other member states even though it provided 40% of the WHO's budget, and fears that the WHO might force it to reform its own health system[209]. Packard adds that the US resisted for a long time to participate in any organizations that were able to influence its own health care system. In the end, the US decided to join the WHO in June of 1948 under special terms: the US did not want to be forced to legislative changes and it wanted the right to leave the WHO at any time[210]. The ratification of the US was important for the WHO, especially due to its financial resources[211]. The US joined mostly because of public pressure and criticism, from inside the US as well as internationally. Additionally, if the US missed the first World Health Assembly, it would have not been included in significant decisions around the topic of global health[212].

In 1949, the Soviet Union as well as other socialist states decided to leave the WHO. Reason for that was the dissatisfaction of the Soviet Union concerning the close cooperation of the WHO with the United States. They accused the WHO of sympathizing with the capitalist, imperialist states, while not doing enough to improve the health of the world's population[213].

[207] Zimmer, 2017: 110
[208] Zimmer, 2017: 126
[209] Zimmer, 2017: 130-136
[210] Packard, 2016: 120-122; Zimmer, 2017: 142
[211] Packard, 2016: 120
[212] Zimmer, 2017: 143-144
[213] Packard, 2016: 123; Zimmer, 2017: 146-149

Due to the withdrawal of the Soviet Union and the other socialist states, there remained no voice in the WHO which declared itself in favour of socialist interests and reconstruction assistance[214]. Amrith explains the absence of the voices of Eastern European health experts in international debates in the 1950s as an irony, since they had pioneering roles in the international health field before 1939[215]. Even though the Soviet Union joined again in 1957, many important decisions had been made without its vote[216].

Besides the Western nations and the Soviet Union, there was a third player in the WHO: the countries of the Global South, which tried to raise awareness for their needs[217].

Zimmer states that even though the agenda of the WHO was influenced by the Cold War, the dynamics were much more diverse. Besides the two superpowers, there were different coalitions between the postcolonial states of the Global South, which turned out to be a successful force. The vote of all members of the WHO was worth the same, which meant that majority votes without the countries of the Global South or against them were improbable. Therefore, the WHO developed a new symbolic order, which differed from and at times was even opposed to the reality of political power. Even though the power relations outside of the field of public health did not change, the "small" postcolonial states had to be seen as partners and their interests had to be heard by the industrial nations[218].

All in all, Zimmer explains that due to the equality between member states in the WHO, states with strong political power had to interact with smaller, postcolonial states in order to win majority votes. The "non-political" orientation of the WHO opened a new spectrum of possibilities and therefore was more than just empty rhetoric[219].

Furthermore, there were discussions about including colonies into the organization. China wanted to include them as "associate members", which would also include the British colonies. Great Britain did not agree to that as they feared that their authority would be weakened, since other member states could then support and influence their colonies[220]. However, at that time, the criticism on colonialism drastically increased at an international level, which restricted the field of action for the British. Farmer and his colleagues also mention this shift towards renewed democratic ideals after the Second World War, in which colonialism was challenged and

[214] Zimmer, 2017: 154
[215] Amrith, 2006: 85
[216] Zimmer, 2017: 154
[217] Zimmer, 2017: 153
[218] Zimmer, 2017: 165-167
[219] Zimmer, 2017: 175-176
[220] Zimmer, 2017: 167-172

questioned[221]. Therefore, even though the British disagreed with this rising anti-colonial atmosphere, they could not reject the proposal of China and agreed to it, fearing more discussions about colonialism could lead to even more dissatisfying regulations[222].

In addition to the proposal of China, the delegate of Liberia, Joseph Togba, demanded that representatives of the associate members should only be recruited from the local population. This was also a technical argument and even though some members, like France and Great Britain, were against it, they did not want to be the subject of public criticism by being listed in the protocols as the states which did not accept it. Therefore, associate members from that moment on were able to represent themselves in Geneva, even though they did not have the same rights as the other members[223].

4.1.2 The Way Back to Disease Elimination Programs

At the first World Health Assembly in 1948 it was not clear in which way the WHO should tackle the topic of "world health". The constitution included clear goals and principles, however, no detailed program that could be put into practice was included. The goal was to establish and improve health care systems worldwide. However, there were two different approaches to reach this goal. On the one hand, some believed the focus should be on eradicating specific diseases with new technical abilities such as vaccines, insecticides, and medications. On the other hand, there was a focus on changing the socio-economic determinants of health in order to improve the health of the world population. The constitution was of no particular help, as it combined the two ideas[224].

In the end, the former approach managed to attract the main focus of the WHO in the late 1940s. Packard notes that this prioritization of eliminating specific diseases seemed to contradict the constitution of the WHO and showed a step back toward disease elimination programs[225].

A big reason for the popularity of the disease elimination approach was the new "wonder weapons" such as vaccinations, penicillin, anti-malarial drugs, and portable x-ray machines[226]. In this context, Amrith emphasizes the arrival of DDT, which he described as a revolution in malaria control with its ability to be easily and rapidly organized[227]. DDT as well as the other medical advancements led to an abundance of diseases for which biomedical solutions were

[221] Farmer et al., 2013: 60
[222] Coghe, 2020: 22; Zimmer, 2017: 173-174
[223] Zimmer, 2017: 174-175
[224] Zimmer, 2017: 199-200
[225] Packard, 2016: 101
[226] Amrith, 2006: 55; Packard, 2016: 108; Zimmer, 2017: 200
[227] Amrith, 2006: 49

now available. They caused an optimistic mindset and made broad-based approaches seem irrelevant[228]. Due to these new "wonder weapons", the WHO chose to focus on problems to which it had solutions. Zimmer claims the focus was not on the most urgent health issues, but on the ones that could be eliminated by the new "wonder weapons"[229]. Packard adds that many experts of the WHO argued that eliminating these diseases was achievable and necessary in a moral aspect[230].

Packard touches on the increased confidence in the know-how of the US due to these new technological advances, which can be detected in President Truman's inaugural address of 1949. This confidence led to assumptions about the populations of the receiving countries, which were described as "underdeveloped", "stagnant", and "primitive". These attitudes are similar to those of colonial health authorities covered in the previous chapter. By valorising their own knowledge and presenting the receiving countries as "underdeveloped" and in need for help, they were able to justify their outside interventions. That local populations have their own ideas of tradition and modernity was not considered[231].

Farmer and his colleagues touch on that and explain that the asymmetries between the Global North and the Global South were simply reorganized around the term "development", while the used practices still had deep colonial roots. Even though the war was followed by a wave of independence movements in Africa, Asia, and Latin America, which changed the relationships between the former colonial powers and their former colonies, the inequity was carried on by the modern development ideology. Farmer et al. criticize that health projects were usually carried out in urban centres, often situated on the coastline. In addition to that, the former colonies were frequently left with incomplete infrastructures and tight national budgets which were based almost entirely on export crops[232].

Amrith also mentions the field of "development" policy established after 1945, in which international health was subordinated to. He notes that the focus shifted to economic development and an associated increase in productivity. This could only be reached by using the scientific and technical advances of "highly developed" areas in order to assist "underdeveloped" countries. Without the advantages of modern technologies, it was believed that "underdeveloped" countries would fall further and further behind. Economic growth was

[228] Packard, 2016: 106 and 125; Zimmer, 2017: 200-201
[229] Zimmer, 2017: 200-201
[230] Packard, 2016: 125
[231] Packard, 2016: 109-110
[232] Farmer et al., 2013: 61

the most important goal, while social goals were of less interest. Therefore, disease eradication campaigns were the most desirable ones in the view of economists[233].

Moreover, the focus on specific diseases fit more into the non-political agenda of the WHO, since changing the socio-economic factors of a population would have been much more complicated. The WHO tried to avoid taking part in political conflicts, which led to new possibilities, but also led to a limited scope of action[234]. Packard adds the changing political environment to this point, in which broad-based approaches were often viewed with suspicion and seen as communist strategies by the US[235]. Amrith also mentions the Cold War as a reason for the undermining of broad-based approaches to health, since focusing on urgent problems and campaigns with quick results was easier than dealing with politically sensitive problems. The WHO wanted to avoid political issues, as well as changes in structures of decision-making or ownership[236]. Even though the WHO's goal was to be non-political, it was not possible to fully clear the topic of politics from the table[237].

Another heavily discussed topic was the independent experts of the WHO. They were chosen due to their specialist knowledge, and they were expected to act technical and neutral. They were not bound to the interests of their home country or government. Instead, they should solely focus on the goals of the WHO and therefore on the health of all peoples. However, there had always been discussions about experts acting in the interests of their countries[238].

In addition to that, the WHO was in need to demonstrate successful campaigns and results, which was easiest done with disease elimination programs. It feared that without showing noteworthy results, other organizations could become serious competitors in the global health field[239]. Therefore, short-term solutions were preferred[240]. Another reason why the WHO felt the need for rapid results were its own member states, which needed to be convinced of the organization before losing interest and providing less resources. After all, the enthusiasm directly after the war was fading rapidly[241].

[233] Amrith, 2006: 85-86 and 92-93
[234] Zimmer, 2017: 182-183 and 202
[235] Packard, 2016: 105 and 112
[236] Amrith, 2006: 84 and 87
[237] Zimmer, 2017: 167
[238] Zimmer, 2017: 186
[239] Zimmer, 2017: 203
[240] Packard, 2016: 106
[241] Zimmer, 2017: 205 and 210

Amrith adds that the budget of the WHO was severely limited. In table 2, which he constructed from the WHO report *First Ten Years of the World Health Organization*, the budget of the WHO from 1949-1957 is illustrated. Amrith describes the WHO as a *"chronically impoverished institution"*[242]. He explains the WHO was established in the midst of the post-war crisis and was too fragile and poorly funded to successfully carry out broad-based health interventions. Narrow disease control campaigns, which used cheap medical technology and showed immediate results, were therefore the valid option for the WHO[243].

Table 2: WHO Income, 1949-1957

	Contributions from member states	Technical assistance funds	Total income
1949	3,693,604	–	5,136,893
1950	4,164,925	–	6,280,427
1951	5,516,096	2,899,069	10,905,332
1952	6,943,486	4,997,233	13,683,999
1953	7,566,598	4,604,064	13,598,382
1954	7,580,165	4,253,435	12,868,945
1955	7,889,113	5,142,903	14,412,719
1956	8,524,767	6,121,044	16,053,189
1957	11,517,988	6,180,663	18,425,093

Amrith, 2006: 91

In addition to that, Packard claims that the US controlled the budget of the WHO due to its financial status, and its withdrawal therefore would have had a tremendous impact on the WHO's financial situation. Consequently, he was not surprised that the WHO would adopt narrow, biomedical approaches that fit into the mindset of the US[244].

Packard adds the epidemics after the Second World War, as well as acute food shortages and famines as another reason for the narrowing vision of health. Coghe focuses on colonial Africa and explains that after the war, the health conditions of the population deteriorated. Due to the war, many African men were mobilized for military service, which led to an increase in communicable epidemic diseases. In addition to that, the colonial health budgets were limited after the war, which also resulted in the worsening of health conditions[245]. Therefore, there was

[242] Amrith, 2006: 90-91
[243] Amrith, 2006: 97-98
[244] Packard, 2016: 122
[245] Coghe, 2020: 20

a need for fast medical responses to these issues and the new technologies allowed the WHO to solve these problems[246]. Amrith agrees with this point as he explains that broad-based approaches were desired, yet undermined due to the immediate, humanitarian crises after the war[247].

Packard states that by the mid-1950s, all international organizations focused on technical assistance instead of broad-based approaches to world health. The WHO and UNICEF were devoted to eradicating malaria and smallpox for the next 25 years[248].

Several connections can be found concerning the theoretical framework of this thesis, which are mostly mentioned by Sunil Amrith and Randall Packard. As mentioned above, the concept of Othering is clearly present in President Truman's inaugural address of 1949. The US was confident about its new "wonder weapons" and was convinced that its "modern" way of life should be implemented in the whole world. This confidence resulted in assumptions about the receiving countries, which populations were described as "underdeveloped", "stagnant", and "primitive".

Amrith's focus is on South and Southeast Asia, which played an important role in the activities of the WHO due to the various outbreaks of epidemic diseases[249]. Amrith points out the racism and Othering regarding the conflict between population growth and public health, in which the West was afraid of *"... proliferating dark masses threatening the security and prosperity of the West"*[250]. Especially Asia was often described as "impoverished", "backward", "overbreeding", and "overpopulated" by the West. Rural Asia, as well as rural Africa, were seen as "another planet" and there was a perceived gap between the mass population and the few natives who spoke the Western languages and were influenced by Western culture[251].

Amrith also touches on the modernization theory as he explains the newly established focus on economic development and increased productivity. Improving the health of people in "underdeveloped" areas was seen as an investment in resources, and the gap between "underdeveloped" and "developed" countries was used to justify "modern" interventions. Farmer and his colleagues also go more into detail about the colonial entanglement of the development policy. They argue that the asymmetries between the Global North and Global

[246] Packard, 2016: 105
[247] Amrith, 2006: 78-79
[248] Packard, 2016: 131
[249] Amrith, 2006: 75 and 81
[250] Amrith, 2006: 94
[251] Amrith, 2006: 77 and 93-95

South were simply carried on under the term “development”, as they focused their campaigns on urban centres and left the former colonies with limited budgets and incomplete infrastructures.

4.2 The Malaria Eradication Programme

Malaria eradication developed into the most extensive single undertaking of the WHO and became a role model for the technical, biomedical perspective to health[252]. The Malaria Eradication Programme (MEP) of the WHO initially showed enormous successes in the targeted areas of the world. New technical “wonder weapons”, such as DDT, raised the confidence of the WHO. However, beneath this confidence lay many obstacles in the practical implementation, failures were overlooked, and fundamental problems were dismissed as minor issues mostly due to improper implementation[253]. It turned out that controlling the complex human and environmental conditions that the MEP had to face in practice was an impossible task. Deeply rooted social inequalities and rural poverty could not be improved solely by medical technical assistance[254].

Even though the WHO tried to distance itself from colonial thoughts and structures, the MEP was not spared from colonial legacies. In the choice of personnel, development of the strategy, as well as the implementation of the MEP, colonial continuities can be observed. This thesis goes so far as to say that these colonial legacies were part of the reason for why the MEP did not achieve its goals in the end. The colonial continuities of the MEP are emphasized and analysed in detail in the following chapters below.

4.2.1 The Malaria Eradication Strategy of the WHO

Early on, malaria was one of the priorities of the WHO due to the significantly high number of cases all over the world. After the Second World War, there were around 300 million cases and 3 million malaria deaths each year. However, it was not clear at that time that malaria would occupy such a dominating position in the international health field compared to other pressing health issues such as tuberculosis, sexually transmitted diseases, nutrition, environmental health, as well as maternal and child health. Especially because at the beginning, the demonstration projects of malaria control were facing quite a few challenges and problems,

[252] Cueto et al., 2019: 96
[253] Amrith, 2006: 122
[254] Amrith, 2006: 126-127 and 131

such as big distances between villages, bad quality of DDT, bad equipment, as well as poorly trained and unwilling local workers[255].

According to Zimmer, the reason for malaria becoming the centre of attention in the international health field was the fear of the world food crisis, starting in 1946. It was believed that the WHO should use most of its resources to fight malaria in areas which were important for worldwide food production. Malaria was seen to have a negative effect on agricultural production in fertile areas, as it decreased the workforce and vitality of the rural population. Because many people worldwide struggled with acute poverty and material deprivation, controlling malaria became a top priority in order to increase agricultural yields[256].

For the global health community, the world food crisis was therefore seen as a chance to prove its contribution to solving international problems. This was another reason why malaria was preferred over other wide-spread diseases. The successful campaigns in Sardinia and Greece in 1947 and in Venezuela in 1949 led to the belief of triumphant results using "wonder weapons" such as DDT and became role models for international campaigns. In addition to that, the WHO was under pressure to present a large-scale malaria program because of the competition of UNICEF, which also considered getting active in the field of malaria control. Therefore, many national campaigns to fight malaria were launched, mainly in Asia and Latin America, in the first half of the 1950s[257].

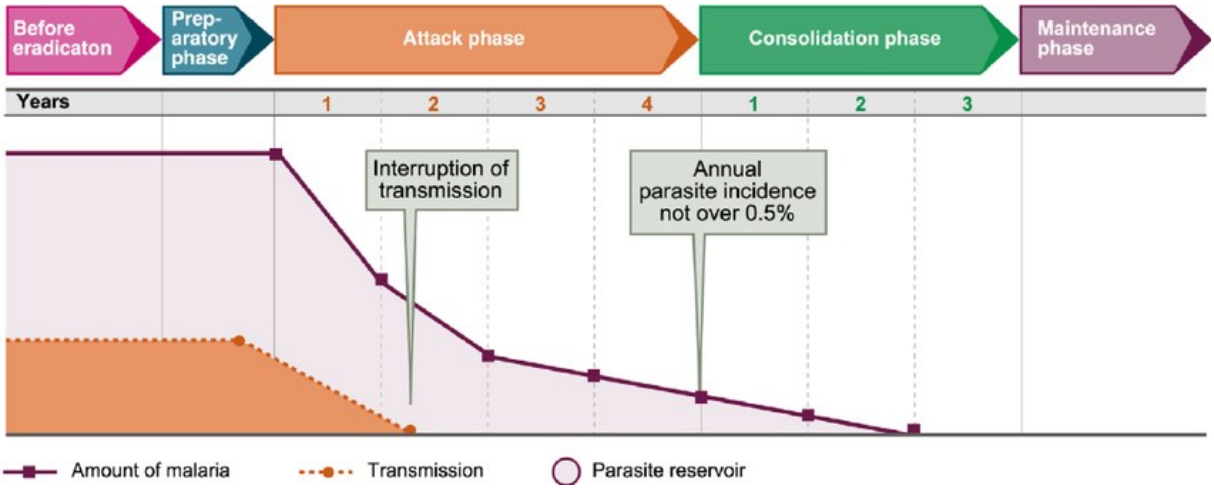
At the beginning of the 1950s, there was a significant shift from the desire to control malaria to the desire of eradication. Eradication had already been talked about in the 1940s, however, it was meant as a long-term goal. It was believed to be unrealistic to fully eradicate malaria at the time and many warned to be careful when using the term eradication, as the WHO was not able to achieve this goal. However, as of 1953, eradication became an official short-term goal and replaced malaria control[258]. In May of 1955, the global Malaria Eradication Programme, short MEP, was officially launched and planned to last 5-8 years in total. The major difference from previous efforts was that it relied heavily on the use of insecticides, especially DDT. Instead of fighting against the larvae by eliminating breeding sites, adult mosquitoes were targeted by massive sprayings of DDT. It was not only the centre of attention of the WHO, but of the global health field in general at the time[259].

[255] Zimmer, 2017: 220
[256] Zimmer, 2017: 221-222
[257] Zimmer, 2017: 223-224 and 242
[258] Zimmer, 2017: 243-244
[259] Cueto et al., 2019: 96-97; Zimmer, 2017: 244-245

The WHO provided a definition and strategy for the elimination of malaria, which consisted, as shown in Figure 4, of four different phases[260]:

1. Preparation Phase: this phase was planned to last around 1 year and focused on building up the structure for a nation-wide malaria program, for example through surveys and the recruitment and training of staff. For areas with 1 million inhabitants, it was intended to have around 500 workers.
2. Attack Phase: in this phase, all buildings in the targeted areas were sprayed twice a year with DDT. The focus was on the interior walls due to the fact that the mosquitoes were sitting on the walls after biting. All buildings in which humans were residing were targeted, which meant not only houses, but also public institutions, religious sites, and stables were being sprayed. The attack phase was meant to last approximately 3-4 years. During that time, it was important to stop the transmission because the pathogen usually did not live longer than 36 months in the body of their host.
3. Consolidation Phase: this phase happened after the sprayings and focused on searching for remaining cases and treating them with medication. When no citizen contracted malaria within 3 years, a country was considered free of the disease.
4. Maintenance Phase: in the last phase, the special anti-malaria organizations created for the MEP were integrated into the general health care system, and they were responsible for searching and containing imported cases and small outbreaks of malaria.

Figure 4: The 4 Phases of Malaria Eradication by the WHO



Nájera et al., 2011: 2

[260] Cueto et al., 2019: 99; Zimmer, 2017: 244-245

Packard argues that malaria control and subsequently a global eradication program being the centre of attention of the WHO activities was surprising at the time. Health authorities were warning about financial and logistical problems, as well as people in malarial areas losing their immunity to the disease, which in turn could be a threat to their health in case malaria would not be fully eliminated. In addition, Packard notes that the effectiveness of DDT was unknown in many areas of the globe, for example in places where mud surfaces were common in housing. The early successes of malaria control with DDT were mostly in areas without mud walls, and it was known beforehand that most malaria-ridden regions commonly had mud houses. In addition to that, it was known that in many areas, the malaria control programs were not well organized and poorly staffed, which led to poor application of DDT[261].

Even though a special malaria account was created for voluntary distributions, it was not known how much each country would contribute to the fund, or even how much the eradication would cost. Packard additionally points out that the resolution for the MEP was never reviewed by the Expert Committee on Malaria before it was launched. Even though the committee supported malaria eradication, it did have numerous concerns about the application and effectiveness of DDT and other pesticides. It suggested more research to be done on this topic and meanwhile focusing on a broader range of approaches, for example in terms of agriculture and social conditions[262].

Amrith gives another example of a critical voice inside of the WHO, the Liberian delegate Dr Joseph Togba. He questioned the effectiveness of the WHO's strategy, as he pointed out that while it might work in countries with a more developed health infrastructure like Ceylon, it might not work in countries like Liberia, where there are lots of scattered villages, bad communications, and unfavourable weather conditions. In addition, he also criticized the lack of research on DDT[263].

However, the opinions against the global malaria campaign were not considered. Even though there was a lot of uncertainty, Packard explains malaria still became the centre of attention of the WHO due to the early successes of malaria control programs, the acceptance and willingness of health authorities across the globe to participate, as well as the support of the United States[264].

[261] Packard, 2016: 138-139
[262] Packard, 2016: 139-140
[263] Amrith, 2006: 118-119
[264] Packard, 2016: 141

Farmer and his colleagues explain this shift from control to eradication with the rising confidence in the power of science and technology, especially in the new "wonder weapon" DDT[265]. Amrith explains it was believed that this new technology was capable of subduing nature and creating a world free from disease[266]. Cueto and his colleagues also mention the faith in new technical measures due to the successful campaigns in a few areas like Egypt, Sardinia, Venezuela, and Guyana in the 1940s[267].

However, along with Zimmer and Packard, Amrith goes deeper into the topic as they note that it would be obvious to assume that this shift happened solely due to the rising optimism of the new "wonder weapons". Zimmer explains the shift did not occur because of increased confidence, instead, the opposite was the case. Packard agrees as he states there was more and more insecurity among the involved actors and the WHO feared that the willingness of political leaders in providing resources and support for malaria control would not last for long. Therefore, an intensive, time-limited eradication program was believed to re-motivate the governments to mobilize their resources[268]. After all, it would save a lot of money to eradicate the disease instead of dealing with the continuing control costs[269].

Even more important than that was the fear of the mosquitoes developing resistances against DDT, mentioned by numerous historians covered in this thesis. Packard explains the switch from control to eradication as a combination of faith in pesticides and the fear of pesticide resistance in mosquitoes. He mentions that after the Second World War, the reliance and dependence on the use of pesticides had increased rapidly. Therefore, mosquitoes developing resistances became a serious threat which had to be avoided at all costs by eliminating malaria as fast as possible[270].

Even though there was hardly any evidence and resistances in mosquitoes were occurring quite rarely at that point, it was strongly believed that after 6-10 years into the global spraying, there would be a highly increased number of resistances in mosquitoes. Therefore, there was only a limited amount of time to use the "wonder weapon" DDT. Amrith adds that the knowledge of the WHO about malaria as well as insecticides was limited, which might be the reason why isolated reports of mosquitoes developing resistances created such panic. This panic is seen as the main reason why the WHO shifted from malaria control to eradication in such a short

[265] Farmer et al., 2013: 63
[266] Amrith, 2006: 116
[267] Cueto et al., 2019: 92
[268] Packard, 2016: 143; Zimmer, 2017: 246-248
[269] Packard, 2016: 138
[270] Amrith, 2006: 117; Packard, 2016: 141

amount of time[271]. It was believed there was no other choice than to launch a global program against malaria as soon as possible, as time was of the essence[272]. Zimmer describes it as a combination of unprecedented possibilities due to new technological advancements on the one hand, and the fleetingness of this unique moment on the other hand[273].

Packard adds that other countries and international organizations, like the PASB, had already agreed and planned on shifting from malaria control to eradication. Therefore, the WHO was influenced by national and regional interests. In addition, the WHO wanted to have the leading position of the malaria eradication campaigns, as Amrith mentions that it struggled for legitimacy and funding[274].

Zimmer as well as Amrith point out that materially and financially, the WHO did not play an important role in malaria eradication as most of its budget for the MEP came from Washington. In India, the WHO covered 7% of the costs of the National Malaria Eradication Programme (NMEP) in the first year, and after that not more than 1%. In other countries its contribution was a little bit higher, but overall, it only had 8 million dollars each year to divide between 60-80 nations, while it also had to finance the experts that it sent to the field. However, the importance of the WHO did not lie in its financial contributions. Instead, its technical expertise and authority in the global health field was essential[275].

In the first half of the 1950s, the warning that malaria eradication would soon not be possible anymore due to increasing resistances in mosquitoes was gaining a lot of attention. This developed into a global message by the WHO to all member states, which legitimized the global eradication of the disease. The massive use of insecticides like DDT was not an invention of the WHO, as it had already been used in the Second World War. However, the WHO was responsible for providing a strategy for malaria eradication, which was used by all national programs. It concentrated on spreading its methods by building training centres on all continents, providing manuals for malaria eradication, fellowships for personnel from the Global South, and sending hundreds of experts into malaria areas. The WHO had professional authority in the field of malaria eradication. It was also in contact with important malaria experts, without them having to be employed at the WHO. Thus, it was in touch with people

[271] Amrith, 2006: 118 and 147; Cueto et al., 2019: 97; Packard, 2016: 138; Zimmer, 2017: 249-250
[272] Packard, 2016: 138
[273] Zimmer, 2017: 252-253
[274] Amrith, 2006: 117; Packard, 2016: 142
[275] Amrith, 2006: 103 and 106; Zimmer, 2017: 298-299

like Frederick Soper or Paul Russel, who were well-known since the campaigns of the Rockefeller Foundation[276].

Amrith adds that with its universality approach, the WHO tried to distance itself from colonial medicine in order to establish its authority. Global health focused on homogenization while not going into detail about the problems of "culture"[277]. Amrith and Cueto et al. explain that using a technical approach also enabled the WHO to create innovative changes without having to socially or economically transform the targeted populations[278].

In addition, the WHO was globally collecting information about a variety of diseases. With the increasing number of pilot projects, the WHO was able to hold information about almost everywhere in the world, except for China, the North of Vietnam, and the Soviet Union. This information strengthened the thought of a global interconnectedness, in which the challenges of malaria were also relevant for countries in which the disease was not endemic. The WHO had another important function, which was to coordinate and evaluate many national projects. Besides that, it was an important intermediary between the financing countries and institutions and the receiving countries. The WHO provided quality assurance for the giving countries and in turn also provided the security of receiving international funds to the receiving nations[279].

It would not have been possible for the WHO to launch the MEP all by itself. Instead, there was a specific consensus and overlap of interests between a variety of different actors. Due to this special constellation in the mid-1950s, it was possible for the WHO to be the leading authority in the fight against malaria. Amrith explains that at that time, the post-colonial states were at the height of their confidence, eager to work together with international organizations. He also highlights the importance of the WHO's non-political status, which resulted in its advice having more weight compared to nation states[280]. Zimmer agrees by claiming that the MEP would not have been possible without the WHO as a coordinating and evaluating, non-partisan authority. In that context, he concludes that the MEP was a project of the WHO[281].

[276] Zimmer, 2017: 300-302
[277] Amrith, 2006: 106-107
[278] Amrith, 2006: 101; Cueto et al., 2019: 87
[279] Zimmer, 2017: 301-303
[280] Amrith, 2006: 103 and 186
[281] Zimmer, 2017: 305

4.2.2 Colonial Continuation due to Personnel in the WHO

An important point that can be noticed while analysing the work of the different historians mentioned in this thesis, is the continuation of personnel with colonial mindsets in the WHO.

Packard as well as Cueto and his colleagues mention the important role of Marcolino Candau, the general director of the WHO at the time. He strongly supported the proposal for malaria eradication. Candau received training in public health and malariology at the Johns Hopkins School of Hygiene and Public Health, where the approach to eliminate one disease at a time was commonly taught at the time. He worked under Frederick Soper for several years in a malaria control program in Brazil, which explains his strong support for malaria eradication[282]. Gladwell claims Soper even had an important role in getting Candau elected as director-general of the WHO, in order to push through his ideas[283].

Frederick L. Soper is an important figure in this context as well. He already had the goal of eradication in mind in the 1930s, in the course of the Rockefeller Foundation's campaigns. His demonstration campaign in Ceará, Brazil, for example, was successful in ending the malaria epidemic and destroying the species of *Anopheles gambiae* in that area. This was seen as proof that malaria could be eradicated through technical measures and military-style interventions. After the war, he was the director of the PASB. He was convinced that eradicating malaria was only possible with strict military principles, and that this method could be applied to many other infectious diseases as well. He put aside the traditional malaria control measures, which required a long-term commitment of both personnel and resources, and focused solely on eradication. He believed that it either led to great successes or miserable failures, there was no in-between with moderate improvements. This thought was also dominant in the international health field since 1955, during the time of the MEP[284].

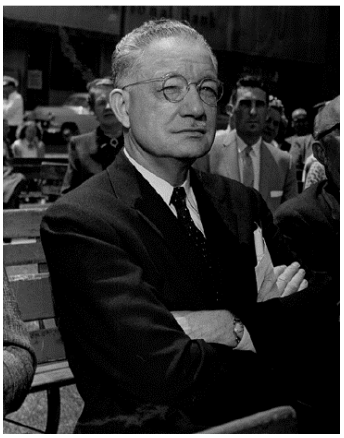
Malcolm Gladwell, a journalist and historian, wrote an article about Fred Soper and the MEP. In the article, it seems like his sole focus is on Soper and he thereby reduces the complexity of the situation, for example by not taking into account the political climate at the time, the contributions of other scientists, and the complex situations of the countries of the Global South. He portrayed Soper as the "hero" of malaria eradication, by making it seem like the MEP and its strategy was solely his endeavour. However, Gladwell does give an interesting insight about the personality of Fred Soper. His former colleagues described him as very cold and formal,

[282] Cueto et al., 2019: 97; Packard, 2016: 144
[283] Gladwell, 2002: 488
[284] Cueto et al., 2019: 92-93; Zimmer, 2017: 246

always wearing a suit and tie. One colleague told a story about how much weight he lost while working for Soper, while another recounted Soper looking uncomprehendingly when he asked to visit his sick wife at home[285]. Gladwell explains that Soper's campaign in Brazil in the 1930s was successful because he was in charge and was working together with a dictator. Therefore, he had the possibility to make it illegal to prevent sprayers from entering the house or from draining swamps. The most important characteristics in his method were discipline, motivation, organization, and determination. A colleague of Soper recounted that he himself said that eradication is not possible in a democracy. He was known for his fanaticism and absolutism, and when he was looking for a job at Johns Hopkins in 1946, they turned him down because, in their words, he was a fascist[286].

Candau and Soper were not the only ones with a colonial background in the WHO. Another important figure in the MEP, amongst many others, was Emilio J. Pampana. He studied at the Medical School of Florence and at the London School of Hygiene and Tropical Medicine and had been employed at the Institute of Malariology in Rome[287]. He therefore had the same mindset as most of the people who were trained in the schools of the Rockefeller Foundation.

Figure 6: Frederick Soper



Cueto et al., 2019: 102

Figure 5: Marcolino Candau

Berto, 2021

The central role of Frederick Soper and likeminded individuals in the MEP campaign of the WHO shows the continuation of colonial thoughts and ideas. Soper believed in military-like, top-down strategies that needed to be followed to the smallest detail. He believed a dictatorship was necessary to carry out the strategy successfully. Both were part of the Rockefeller Foundation before joining the WHO. They were trained at the Rockefeller Foundation's schools

[285] Gladwell, 2002: 483-484
[286] Gladwell, 2002: 492-493 and 496
[287] Cueto et al., 2019: 98

of public health, where the strategies of Gorgas and other physicians, which were developed in colonial settings, were taught. As mentioned before, these schools connected colonial medicine with the international health field and focused on creating a common view in the new generation of international health experts. The focus was on the science of disease control, while knowledge about working with local populations was neglected or ignored. The strong colonial connections and the colonial body of thought were passed on to the next generation, which can be seen in the mindset of Soper.

4.2.3 The Influence of Modernization Efforts

In the 1950s, there was a shift in the reasons for malaria eradication. While the world food crisis was the main reason for malaria control in the 1940s, it shifted to economic development in the 1950s. Malaria was perceived as an economic disease because it was slowing down agriculture, industry, and commerce[288]. Even though malaria being an obstacle for economic development was mentioned before, it was now the main argument. Zimmer notes that this was due to economic costs being easier measurable and presentable in numbers. For example, there was the calculation of lost "man days", in which the time period of how many days each worker infected with malaria would not be able to work, was presented[289]. Cueto et al. add it was calculated by the WHO that malaria elimination would cost less than the economic losses it would cause in the long-term[290]. Amrith concludes that the control and eradication of malaria fit well into the framework of technical assistance because of its simple, mass application of DDT. The goal was easily understandable, good for the image of global health, and contributed to the important goal of "economic development"[291].

The thoughts of the global health field in the 1950s were similar to the general discourse of development during that time. The idea of "modernizing" "underdeveloped" areas in order for them to become the ideal model, a "modern" industrial state, was prominent according to Zimmer and Cueto and his colleagues[292]. The main model for this was by Walt Whitman Rostow, who describes the transformation from "underdeveloped" to "developed" states in 5 different stages. He explains the reasons for countries being "underdeveloped" can mostly be found in those countries themselves. According to him, the traditional society needs to be politically, socially, and economically reformed in order to enable economic growth. By doing

[288] Cueto et al., 2019: 93; Zimmer, 2017: 268-269
[289] Zimmer, 2017: 268-269
[290] Cueto et al., 2019: 93
[291] Amrith, 2006: 117
[292] Cueto et al., 2019: 87; Zimmer, 2017: 272

that, modern science can be used in agriculture and industry, which is essential for growth. He argues that "developed" nations need to intervene in order to enable this transformation of "traditional" societies. Rostow also mentions that politically, a group that prioritizes modernization needs to be in power[293].

In the global health field, it was believed that military-like eradication efforts would lead to "modernization". Countries of the Third World should follow the exact path that industrialized countries took[294]. Rural areas should be equipped with "modern" types of housing and village structures, and people should transform from peasants to modern democrats. Malaria eradication fit well into this train of thought because it enabled the intrusion into rural areas, which is briefly mentioned by Packard as well[295].

Rostow's model divides societies into 2 different poles: "traditional" and "modern". In his view, one is better than the other and "traditional" societies have to aim for becoming "modern" by following the exact same path of industrial countries. The concept of Othering by Edward Said can definitely be observed in this dichotomous way of thinking. "Traditional" societies are seen as "inferior" and "backward", while "modern" societies are the "superior" role model to which the others need to adapt to. The concept of Provincializing Europe by Dipesh Chakrabarty is also present in this case. The global health field was characterized by a Eurocentric perspective in using the Western world as a role model for other societies. Western medical science was seen as "superior" and it was believed that without this technology, "underdeveloped" countries were not able to develop at all. The history of countries of the Global South was not considered, even though it differed greatly from the history of the Global North.

Sunil Amrith adds some important points to this topic by revealing the way in which the targeted populations of the malaria campaign were described by health experts. This, too, can be categorized under the concept of Othering. He explains that the new global health campaigns appeared to be inherently post-colonial initiatives. Asian nations were now granted access to international expertise and technologies, which they were denied under colonial rule. However, he explains that colonial legacies existed in this new utopia, for example in the perception and description of certain population groups. The subject populations of the malaria campaigns were, for example, described as "more-evolved castes", "very underdeveloped hill tribes", or "very primitive aboriginal tribes". The British public health specialist Arthur Brown, who had

[293] Rostow, 2016 [1960]: 46-49
[294] Cueto et al., 2019: 87
[295] Packard, 2016: 138; Zimmer, 2017: 274

studied at the London School of Hygiene, described the Cambodians as living a "lazy happy life" with minimal effort, who in his eyes needed reforming Europeans as guidance. The way he described himself and his colleagues riding through town on 8 elephants, being cheered on by the population, shows his attitude of superiority[296]. Zimmer also mentions this consisting perception by explaining that the US feared the rural areas of Asia, and described the population as "rebelling, hungry peasants" who were difficult to control, and in many cases dangerous[297].

Amrith explains that in the course of the malaria programs, these differences were not so much mentioned in order to reform the "savage", but more due to "technical" reasons. Each population group had different traditions, for example building their walls of different materials, and therefore caused different challenges to the spraying teams. However, he claims the dichotomy between the West and the Third World, and therefore the inferior perception of colonial populations, remained. In addition, he describes technical assistance as the panacea for societies that could not afford medicine, and claims that by focusing on eradication programs, certain kinds of knowledge and expertise were favoured while others were devalued. He also explains that technical assistance disregarded the importance of locality in the practice of malaria eradication programs[298].

Thomas Zimmer includes these thoughts into his writings, however, he does remind his readers that the situation was quite complex. He claims these thoughts of "modernization" were not only popular in the Global North. Elites from countries in the Global South had the same mindset believing they needed to improve the living conditions of their population in order to overcome their "underdevelopment". It was believed that malaria eradication would lead to the expansion of cultivated areas and the increase in productivity of the labour force. He mentions the elites of postcolonial states as an example, focusing on India. In India, for instance, the same shift in reasoning from the world food crisis to economic development took place. The focus was now on "modernization", which resulted in increased expenses for the industrial and mining industries. This thought also spread to malaria eradication. Since malaria was a huge problem in India, Indian elites believed that malaria eradication would increase the economic development of India[299].

Zimmer therefore concludes that malaria eradication was not just a project of the WHO or the US, and India was not just an experimentation field. The MEP was possible because in the mid-

[296] Amrith, 2006: 107 and 111
[297] Zimmer, 2017: 273
[298] Amrith, 2006: 107-108
[299] Zimmer, 2017: 270-271 and 274

1950s, the interests of many different stakeholders overlapped. The US, Western health officials and postcolonial elites did not have the exact same interests, but the overlapping was significant enough to launch the MEP[300].

4.2.4 The Role of the Cold War

Cueto and his colleagues mention that besides the confidence in the power of "magic bullets", the WHO was also characterized by the influence of US foreign policy during the 1950s[301].

After launching the MEP in 1955, the implementation of the program did not happen immediately. The WHO founded the Malaria Eradication Special Account (MESA) for governments and private institutions to contribute financially to the project. However, the budget was too tight to effectively launch the program. The quality of the MEP changed significantly in 1957, when the US decided to join in and support the campaign[302]. It contributed more than 90% of the budget for the MEP in the 1950s and 1960s, while also investing in malaria bilaterally. This significant financial contribution of the US made it possible to fully launch the MEP on a large scale[303].

Reason for the sudden contribution of the US to the MEP was a shift in US foreign policy in the mid-1950s. The US had invested in bilateral and multilateral international health programs during the decade after the Second World War, and "development" became an independent element of US foreign policy after the speech of President Truman. However, the implementation left much to be desired, as health only played a small part in development cooperation for the US. When Dwight D. Eisenhower became president in 1953, the contributions to global health and foreign aid in general decreased even more, due to his belief in "trade not aid"[304].

However, Zimmer and Cueto et al. both mention that there was a radical shift in US foreign policy in 1955 due to the Cold War. The Soviet Union started to offer economic support to several countries in the Global South in order to improve their relationships and influence the young postcolonial states. The US interpreted this new strategy of the Soviet Union as a serious threat and therefore significantly increased its foreign aid contributions in order to repress Soviet influence. Cueto and his colleagues mention that communism as well as malaria were both described as "enslaving" circumstances for "developing" countries by the US. The US

[300] Zimmer, 2017: 274-275
[301] Cueto et al., 2019: 86
[302] Cueto et al., 2019: 98; Zimmer, 2017: 253
[303] Zimmer, 2017: 254
[304] Zimmer, 2017: 254-255

focused heavily on Southeast Asia, especially India. It was believed that India was particularly susceptible to communism due to the Soviet Union's foreign aid projects in India[305].

Focusing on India was a new strategy of the US, since it was not perceived as strategically important to the US directly after the war. In addition to that, India and the US did not have a pleasant relationship due to India's neutral politics and criticism of colonial powers. Before 1950, India did not receive any support from the US. However, Southeast Asia gained importance to the US due to the communist victory in China 1949 and the deteriorating situation in the Korean War. It was believed that India needed to be stabilized and used as a model for democratic development, in contrast to China[306].

At the beginning, India financed over 60% of its National Malaria Eradication Programme (NMEP) and invested mostly in the provision of workers. At the peak of the program, more than 40% of the health budget was used for the eradication of malaria. However, it was heavily dependent on the support of the US, which provided most of the equipment and DDT through direct, material aid in the first few years. Besides the direct support of the US, the US also supported India indirectly via development cooperation and selling wheat. The extent of the US-engagement in the MEP, especially in India, was enormous. India received almost half of the 30 million dollars of the yearly US budget to fight malaria. For other countries, the US was also the most important source of financial support, both bilaterally and multilaterally[307].

Hence from the mid-1950s on, the US was willing to invest more resources into foreign aid. Farmer and his colleagues point out that the Cold War played an important role in launching an eradication campaign instead of a broad-based approach against malaria[308]. The US wanted fast and visible results, which is why the global health field, especially malaria, was seen as a perfect opportunity to counter Soviet activities. The goal was to have the leading role in the Malaria Eradication Programme by providing the majority of its financial resources. The reason for this massive contribution of the US was its extreme fear of new postcolonial states shifting to communism. Fighting malaria was seen as a possibility to get the postcolonial states of the Global South on their side[309].

Therefore, the generous contribution of the US to the MEP was controlled by self-interests concerning the Cold War. The MEP was seen as a means to an end in order to restrict communist

[305] Cueto et al., 2019: 86-87; Zimmer, 2017: 257-259
[306] Zimmer, 2017: 260-261
[307] Zimmer, 2017: 296-298
[308] Farmer et al. 2013: 65
[309] Zimmer, 2017: 263-264

influence and expand US influence over as many countries in the Global South as possible. This seems like a new form of colonialism, in which influence is not gained through violent conquest, but instead through global health programs.

Hence, the political benefits of providing resources for malaria elimination for the US were enormous. Additionally, the teams of the MEP were in contact with every single household, which meant that the governments could show the preliminary successes of the program[310]. The US was able to demonstrate its apparent benignancy and commitment to the well-being of all people. Through the MEP, it was able to connect to the population, show its humanitarianism, all while being quite cost-effective. Besides the political benefits of increasing its global moral reputation, it was important to the US to improve the economic development and the purchasing power of the affected states through the MEP in order to create new markets and enable the people of the Third World to buy American goods[311]. In addition, working together with the WHO was beneficial for the US due to the WHO's pool of manpower, training resources, and its acceptability overseas due to its non-political character[312].

Another reason why the US got involved in the global health field was the desire for "modernization", as mentioned above. It wanted to transfer Western technology to countries of the Global South in order for them to take off and follow the American path to industrialization. Therefore, the global health campaigns of the 1950s were launched by medical elites based in urban centres, who were trained in Western medical science. Cueto and his colleagues explain that in the eyes of modernization theory, health programs were not launched for charitable purposes, but seen as capital investments because healthy populations were beneficial for local and world economies[313].

Besides that, the US benefited from shipping DDT and other insecticides to every part of the world where malaria eradication was carried out. US-American industries, especially petroleum and chemical companies, profited heavily from malaria eradication[314].

4.2.5 Overlapping Interests

There is a lot of information about the NMEP in India from various authors, since it was monitored very closely during the time when it was seen as a role model for malaria

[310] Zimmer, 2017: 265
[311] Cueto et al., 2019: 87-88; Zimmer, 2017: 266
[312] Cueto et al., 2019: 88-89
[313] Cueto et al., 2019: 89
[314] Cueto et al., 2019: 98-99

eradication[315]. This is why the focus of this chapter concerning the overlapping interests of different actors and the initial success of the program is mostly on India as well.

According to Thomas Zimmer, fighting malaria was not only a goal of the WHO, but also a goal of the Indian government after its independence. Zimmer mentions India as an example of the role of the Global South after the Second World War, and shows that the thoughts and motives dominating the global health field were diverse[316].

From the 1950s on, India gained a lot of attention from the US and other Western countries due to geostrategic reasons. Ever since the cholera pandemics in the 19th century, the Global North had seen India as a source of diseases. Almost all internationally discussed infectious diseases, like malaria, tuberculosis, and cholera, were endemic in India. Therefore, the WHO focused on India early on. Out of the almost 100 malaria programs in the course of the MEP, none of them were as large in scope as the ones in India. The origin of these malaria initiatives in India were not only in Geneva or Washington, but efforts in New-Delhi and other parts of India also played an important role[317].

After gaining its independence on the 15th of August 1947, India had to deal with the dramatic consequences of the partition of the subcontinent. There were around 10 million refugees, armed conflicts, poverty, as well as food shortages. In the midst of all these challenges, the government tried to form a nation state nine times the area of today's Germany, with around 370 million inhabitants speaking more than 20 official languages. The most important goal of the Indian government was to fight the acute poverty of the population. In order to do so, it aimed to improve nutrition and living conditions, fight unemployment and illiteracy, and improve the overall life expectancy. It was believed that India needed to be economically independent in order to reach these goals[318].

Jawaharlal Nehru, the first Indian president, was convinced that India also needed to get rid of its social "backwardness" and "traditional" beliefs. He wanted to transform India into a "modern", democratic, industrial nation such as the US or other Western nations. Besides the Global North, he also took the Soviet Union, Japan, and China as examples[319].

[315] Zimmer, 2017: 317
[316] Zimmer, 2017: 224-225
[317] Zimmer, 2017: 225-226
[318] Zimmer, 2017: 226-227
[319] Zimmer, 2017: 228

In addition, India was convinced of the activities of the WHO and therefore wanted to have a leading role in the organization. Besides working together for world peace, India was hopeful that due to the WHO's technical structure, it might not be dominated by the superpowers and give a voice to nations of the Global South, like India, as well. India had a lot of sympathy for the WHO, since it shared the same democratic and egalitarian spirit. It organized a big advertising campaign for the WHO, with huge festivities on world health day all over the country. Most of all, the founding of the WHO led to high hopes of an improvement of the health of the Indian population. It was believed that the WHO would be much more capable than its predecessors to support the health of its member states[320].

Among other things, India expected support from the WHO in the battle against malaria. Malaria was seen as the most dangerous disease in India, also after its independence. In the 1940s, there were around 75 million cases and 1 million deaths each year. The disease was responsible for 20% of all deaths and therefore the principal cause of death in India. After the war, India found out about the new "wonder weapon" DDT and had the necessary personnel resources, which is why it requested that the WHO should start anti-malaria initiatives in India. To convince the WHO, India argued that it possessed a huge amount of fertile agricultural land and therefore, the whole world would profit from controlling malaria in the midst of the world food crisis. Malaria control was an effective way for the WHO to improve the world food crisis. It was discussed that areas with high agricultural potential, which could not be used because of the high incidence of malaria, should be prioritized. Not only did malaria prevent the use of agricultural land, but it also decreased the vitality and productivity of the population[321].

For India, controlling malaria would also solve other problems. Millions of refugees would be able to inhabit agricultural areas which were not habitable before due to malaria. On top of that, India would benefit from malaria control since the increase of agricultural production would improve the food crisis of its own population[322].

Amrith and Zimmer point out that India was also highly interested in malaria control because it had to earn its legitimacy as a young nation state. It made promises to improve the living conditions of the population, and to do a much better job at it than the former colonial officials[323]. However, even after gaining its independence, the health sector was not a priority

[320] Zimmer, 2017: 228-232
[321] Zimmer, 2017: 233-236
[322] Zimmer, 2017: 235
[323] Amrith, 2006: 103-104; Zimmer, 2017: 237

of the Indian government and therefore the government commitment was quite low[324]. Zimmer claims this was the most detrimental legacy of the colonial era. India focused more on economic development and modernization in order to reach the living standard of Western societies. Concerning health, campaigns against specific diseases were attractive for the Indian government, since they achieved fast and noticeable improvements[325].

Besides India, many other nations had similar connections between international health policy and goals of the formation and legitimization of nation states. In Brazil, for example, malaria had prevented the productive use of agricultural areas in the hinterland. In 1956, the most important promise of the new president was to enable the use and "modernization" of rural areas, especially the Amazon Basin. This plan was expressed symbolically in building Brasília, the new capital of Brazil, in the middle of the jungle in 1960[326].

The political decision-makers in these countries of the Global South believed that malaria was not only a threat for public health but believed that the control of malaria would enable them to tackle multiple acute problems at once. Taking care of these problems was important in order to create a "modern" nation state[327].

Therefore, Zimmer argues that the countries of the Global South in which the malaria programs were launched, such as India, Brazil, and Mexico, were not just a field of experimentation and passive object in the global health field. What is important are the overlaps and connections between the simultaneous thoughts in Geneva, Washington, New-Delhi, and other cities. For all these countries, malaria had been a serious health problem long before 1945. However, after the Second World War, there was a variety of new possibilities. Even though the desire to control malaria was due to different interests, the increase of worldwide food production was what brought them together[328].

Even though the focus of this thesis is on colonial legacies in the MEP, it is important to mention that the Global South was not just a passive experimental field and that there were overlapping interests of different parties. While analysing disadvantages of the Global South, this point can easily be neglected, which is why it is mentioned in this thesis.

[324] Amrith, 2006: 102; Zimmer, 2017: 238
[325] Zimmer, 2017: 238-239
[326] Zimmer, 2017: 239-240
[327] Zimmer, 2017: 240
[328] Zimmer, 2017: 241

4.3 Colonial Legacies in the "Downfall" of the MEP

The National Malaria Eradication Programme in India was officially launched in 1958, which can also be characterized as the peak of the MEP[329]. This massive campaign rapidly showed impressive results. While there were 75 million malaria cases in the year of gaining independence, there were under 100.000 cases and no deaths in 1961[330]. The WHO was convinced that malaria eradication was on its way[331]. At the end of the 1960s, the WHO was able to document even more tremendous successes of the MEP all around the world. The disease was fully eradicated in 37 countries, and in many other areas the risk of infection was dramatically reduced. In India, there was a 99.7% reduction of infected people compared to 1950, and since the early 1960s there were no malaria deaths[332].

At this peak, there were more than 200.000 spraying workers in 66 countries, spraying around 600 million buildings with DDT. Including the pre-eradication programs, there were around 100 nations and territories incorporated in the project. At the end of 1960, the MEP had been almost everywhere in the world, with the exception of sub-Saharan Africa[333].

The campaigns of the MEP were launched in areas that had significant geographic, political, economic, and social differences. The strategy of the WHO was used in all cases. Even though there was some space for national or regional modifications, there was still a high uniformity in the implementation of the MEP. From the mid-1950s on, the focus of all projects against malaria was on using DDT in accordance with the strategy of the WHO. Most programs were proceeding similarly. The first years of the program usually showed amazing results, but then it got difficult to achieve full eradication[334].

At the time the WHO documented its greatest successes, it had already stopped the MEP. The idea of stopping the MEP started in 1966, when the WHO realized that most of its campaigns were too slow in getting results and some only had tremendously low success rates. It was believed that in most countries, the strategy should be thought over. In 1969, the WHO concluded that eradicating malaria in such a short period of time would not be possible. The countries which were close to successful eradication were encouraged to keep going with the campaign, while others were encouraged to stop focusing on eradication[335]. Sunil Amrith adds

[329] Zimmer, 2017: 275
[330] Cueto et al., 2019: 100
[331] Amrith, 2006: 165-166; Zimmer, 2017: 294-295
[332] Cueto et al., 2019: 108; Zimmer, 2017: 306-307
[333] Zimmer, 2017: 285
[334] Zimmer, 2017: 286
[335] Cueto et al., 2019: 108; Zimmer, 2017: 306-307

that in practice, the campaigns against malaria were a lot more complex in their implementation than what was discussed and written down in the guidelines by experts of the WHO. He explains there was a gap between the utopian plans for a world without disease and the actual conditions in the field[336].

4.3.1 Problems with Implementation

What is important to mention is that according to Zimmer, while there is an abundance of information on the theory and planning of the MEP, there is a lack of information on its implementation. At that time, the focus was on depicting the program in numbers and statistical surveys, and not on narratives. Even less information is known from the Global South, which did not have archives in the 1950s and 1960s[337].

4.3.1.1 The Lack of Basic Health Care Systems

Since the first half of the 1960s, an increasing number of problems were reported to the WHO. India, for example, as well as many other countries, had problems with small regional outbreaks in areas in which the attack phase had already been completed. Therefore, the schedule for the program had to be constantly extended. In 1961, India celebrated a tremendous success with only 50.000 malaria cases. However, the number of cases rose again and in the mid-1970, India found itself in a dramatic malaria epidemic with 7 million cases[338].

This development can be seen in many other programs of the MEP, which were characterized by dramatic successes, then followed by increasing cases of the disease. The affected states had the most challenges after the attack phase because they were not able to find and treat all infected inhabitants[339]. They were supposed to monitor all malaria areas when most countries of the Global South simply did not have the basic structures of a health care system that would be needed to enable malaria control. It was believed that "underdeveloped" areas did not have to be economically developed and have functioning health services in order to eradicate malaria, due to the new available technologies. When the attack phase was over and the spraying teams left the areas, it was oftentimes not possible to identify reoccurring cases and to stop local outbreaks[340]. According to Packard, it was only recognized in the late 1960s that a basic primary health care system was necessary in order to successfully eradicate malaria[341]. On top of that,

[336] Amrith, 2006: 99
[337] Zimmer, 2017: 286-287
[338] Zimmer, 2017: 307-308
[339] Zimmer, 2017: 308
[340] Amrith, 2006: 167 and 180; Packard, 2016: 162; Zimmer, 2017: 311-312
[341] Packard, 2016: 164

Amrith explains that by the end of the 1950s, around 2 million people were still living in malaria endemic areas which had not been sprayed at all due to inaccessibility[342].

While UNICEF provided vehicles, materials, and spraying equipment, the WHO was in charge of the provision of technical cooperation and expert personnel, and the governments of the targeted countries provided local workers as well as local campaign leaders. However, the National Malaria Eradication Services were autonomous services established outside of the already existing health infrastructure. Cueto and his colleagues explain that these services were characterized in most places by considerable amounts of prestige and power and resembled campaigns by the Rockefeller Foundation as well as military medical units. They also explain that the local personnel was hired full-time, which was different from the traditional part-time work in the Global South[343].

Cueto and his colleagues highlight another example of the importance of basic health care systems by describing the case of India. India reported significantly different impacts of the malaria campaign depending on the area of the country. While more "developed" areas with good health, communication, and educational systems, like the Indian State of Kerala, were able to eradicate the disease in a short period of time, the progress was much slower and more difficult in isolated, poor regions with bad or non-existent health services. It was also easier to eradicate malaria on islands and in sub-tropical regions because it was harder for the mosquitoes to survive in this climate[344].

The lack of significance regarding basic health care systems in the targeted countries fits well into the concept of Provincializing Europe. Due to Eurocentric thinking and Western ignorance, it was believed that Western technology was superior and strong enough to fix all problems without having to deal with local circumstances.

It cannot be denied that malaria eradication campaigns led to greater awareness of health issues in rural areas. Colonial administrations focused heavily on ports and cities, while malaria eradication led to the availability of technical and financial resources for the populations of the countryside. However, these eradication efforts neither led to rural health reforms, nor to the development of long-term basic rural health services[345].

[342] Amrith, 2006: 124
[343] Cueto et al., 2019: 100
[344] Cueto et al., 2019: 100-101
[345] Cueto et al., 2019: 113

4.3.1.2 Treatment of the Local Population

In the end, the fear of mosquito resistance turned out to be unfounded. Even though there were some resistances, they were not the reason for the failure of eradication. Instead, one reason Zimmer touches on is the WHO's frequent explanation of the wrongful implementation of its strategy in the targeted countries. In India, for example, there were complaints about negligent work due to buildings not being sprayed enough or not at all by the spraying teams, and some blood samples not being examined. Gladwell explains that some sprayers did double layers in the mornings because of the tanks being so heavy, which meant that houses sprayed in the afternoons got less coverage. In addition, there were issues with corruption because insecticides were worth a lot on the black market. It was believed that the low wage of the spraying teams, as well as them not being paid on time, was an important reason for these problems[346]. On top of that, their work was temporary with little possibility for a promotion, while being away from their families for long periods of time[347].

Sunil Amrith sheds light on the intense daily routine of the spraying teams, who had to weigh the necessary DDT for the day, clean and maintain their pumps, measure the area that was being sprayed, and write down all the details about the amount of houses, how many people were living in them, and the names of the owners, on top of submitting a report every evening about their work day. In addition to that, they were expected to be agents of transformation and modernity, serving as an example for the rural populations. They were also expected to demonstrate compliance and follow the spraying guidelines in every detail, without taking initiative or changing the strategy of the WHO[348].

The most important eradication campaign of the MEP was the one in India. It had an extremely large scale with 390 units each responsible for 1 million inhabitants. One unit consisted of around 170 people, and during the time of the sprayings many more field workers were employed. One spraying team consisted of 6 people, 4 of which were sharing 2 spraying pumps, one responsible for refilling the supplies, and one leader. There were a lot of small villages in rural and remote areas, which were difficult to access for the spraying teams. The units were not equipped well, having only one jeep for an area of 200.000 people. Many spraying teams used animals to be more mobile. For example, some rode from one village to the other on the back of elephants, who were characterized as icons of the MEP in India. In other parts of the

[346] Gladwell, 2002: 490; Zimmer, 2017: 309
[347] Amrith, 2006: 126
[348] Amrith, 2006: 114-115

world, like Mexico, horses and donkeys were used as a compensation for the lack of motorization[349].

Figure 7: Spraying Team on the Back of an Elephant in India

Cueto et al., 2019: 104

The requirements for the spraying teams were high. Two workers needed to spray 80 houses per day, surveillance workers needed to control 200 houses per day besides other activities they were responsible for. In addition, they needed to take blood samples of the population, which was impossible to implement. After spraying, they were supposed to check all houses for dead and living mosquitoes, which was also not implemented due to lack of time[350].

The spraying teams faced a variety of issues. When they moved from village to village, they needed a place to stay, which was not thought through by the WHO. They needed to stay in schools or houses of the inhabitants, however, there was no intention of the WHO to remunerate the population for their efforts. Also, the teams had to either walk or ride on the backs of animals for 10 kilometres in the vicinity of a village until they went on to their next camp. The MEP was dependent on the help of the local population, which needed to grant them access to their houses. In order to gain the support of the population, there were many campaigns, festivities, appeals to national solidarity, and talks with local leaders[351].

The daily routine of the spraying teams gives an insight into the division of labour of the WHO's strategy. The WHO cooperated and worked together with local populations. However, local

[349] Zimmer, 2017: 289-290
[350] Zimmer, 2017: 292-293
[351] Zimmer, 2017: 290-292

workers were only used for field work, while WHO experts from the Global North were in charge of the program. The local workers had to follow a strict routine given to them, while it was not desired for them to voice their opinions about adapting the program to local conditions. This fits well into the concept of Othering as well as Provincializing Europe, since a clear dichotomy between the WHO experts and the local workers can be observed. The experts believed in the superiority of their knowledge and therefore primarily used the local population as a cheap labour force, instead of using them as experts and advisors about how to best implement the strategy in their country. The concept of Subalternity by Gayatri Spivak also fits this narrative and is therefore worth mentioning, as the experts of the Global North were speaking for the locals instead of including them into the decision-making and letting them speak for themselves.

To ensure participation, local officers and political leaders had to be convinced by the WHO. Packard notes that gaining local support was not always easy, as local social and religious beliefs at times collided with the eradication strategies[352]. In addition, local resistance from the population grew over time and people did not allow the spraying teams into their homes due to personal, political, or religious reasons[353]. Many claimed the sprayings were disruptive, especially after 2 or 3 rounds of spraying. The owners had to remove everything from their houses, the walls afterwards were covered in a smelly residue from the DDT, and the sprayings sometimes changed ecological balances. Some species of fleas and bedbugs developed resistances to DDT, resulting in plagues in some areas[354]. Additionally, people in some rural areas believed that insects came from God and therefore were strongly against killing them[355]. The populations also had to submit blood tests, which was challenging in some locations due to the powerful cultural meaning of blood. There were thoughts about stricter laws or even forcing the population to obey to these measures [356].

The guidelines did not include how to handle these situations, let alone communication strategies for community cooperation. There are clear colonial tendencies in the way the local population was dealt with and described as. The cultural differences were neither considered nor respected. Just like in colonial times, the local populations were seen as “dependent” and “incapable” of taking care of themselves, as mentioned before in the chapter about the origins

[352] Packard, 2016: 153-154
[353] Cueto et al., 2019: 105; Packard, 2016: 154-155
[354] Packard, 2016: 159-160; Zimmer, 2017: 310-311
[355] Cueto et al., 2019: 106-107
[356] Packard, 2016: 159-160; Zimmer, 2017: 310-311

of the global health care field. Local knowledge and existing infrastructures in the health sector were therefore ignored by colonial personnel, and not much seemed to have changed in the attitude towards local citizens in the course of the MEP.

Packard claims that instead of understanding and working with the local populations, their resistance was interpreted as ignorance and irrational traditional beliefs. He compares it with the yellow fever and hookworm campaigns at the beginning of the 20th century, in which the local population was described as "scientifically backward", "ignorant", "resentful", and not able to understand basic knowledge. He notes that similar campaigns had been successful against yellow fever in the early 20th century, however, this was due to the strong colonial authorities[357].

Amrith agrees with Packard and states that there was a problem of understanding, as contact with local populations was avoided as much as possible[358]. There was a clear distinction between "us" and "them", and a feeling of superiority over the local population, which fits well into the concept of Othering. Many assumptions of the modernization theory were present, and poverty and "underdevelopment" of Third World populations were linked to "irrational", "superstitious" modes of thinking. These assumptions and descriptions about the local populations of the Global South run through the history of global health, in which colonial populations had always been seen as "uncivilized", "unhygienic" and "primitive".

It was believed that in order to convince the local population of accepting the spraying teams into their homes, the results of the health work had to be as visible as possible. In addition, a language of faith and belief was used, such as speaking of "miraculous" transformations and "dramatic" results. Amrith claims this language was similar to the one of British colonial administrators, who for example explained the acceptance of anti-syphilis drugs in Africa with the African's "belief in magic"[359].

Another reason that caused problems for the MEP was the increase in population growth, for example in India. It was much higher than expected and therefore, the teams were not prepared for the millions more inhabitants they had to take care of. Additionally, the guidelines of the MEP's strategy did not sufficiently take into account that certain populations were extremely mobile. There were several population movements due to religious festivals, labour migration, or civil wars. These movements disrupted the application of DDT and therefore prevented the

[357] Packard, 2016: 160-161
[358] Amrith, 2006: 135-136
[359] Amrith, 2006: 135-136

populations from being protected from malaria. Cueto and his colleagues add that nomadic populations usually slept in tents, which were not suitable for DDT sprayings[360]. Many historians claim that the significance of this and other social or cultural issues were miscalculated by the WHO, as it was believed they could be overcome by the power of DDT[361].

Even when the cooperation was successful, the involved actors ran into technical and logistical problems on a regular basis, such as DDT not arriving on time for the sprayings, delays in the supply line, broken equipment, lack of staff, problems in transport, and the inaccessibility of certain areas[362].

Zimmer and Packard both mention that the guidelines of the eradication strategy assumed that all rural houses were the same, when in fact the different kinds of construction heavily influenced the effectiveness of the pesticides. Clay huts were regularly equipped with new layers of clay, which made the DDT ineffective[363]. Even though this issue had been mentioned before, it was disregarded in the guidelines. Packard and Gladwell both mention reports of the physician Wilbur Downs being physically assaulted by Frederick Soper in the early 1950s for mentioning this issue at a meeting[364]. Additionally, the WHO did not consider that many people in tropical regions were sleeping outside instead of in their huts during hot seasons, which made the indoor spraying ineffective[365]. Cueto and his colleagues add that some mosquito species changed their behaviour and even though they had rested on inside walls before, they started to avoid contact with DDT-sprayed walls[366].

These problems were clearly due to a lack of preparation and consideration of local circumstances. It was believed that dealing with local conditions was not necessary due to the allegedly "perfect" strategy of the WHO. Cueto and his colleagues explain that even though carrying out the MEP in remote, rural areas was difficult because of poor transportation, the WHO blamed "nomads" for "smuggling" malaria into areas that had been cleared of the disease[367].

The difficulties with insecticides led to the thought of focusing more on the inclusion of antimalarial drugs into the program. However, no drug was effective against all species, and

[360] Cueto et al., 2019: 105
[361] Amrith, 2006: 121 and 127; Cueto et al., 2019: 105; Packard, 2016: 154-155; Zimmer, 2017: 310-311
[362] Amrith, 2006: 124-125; Packard, 2016: 154-155 and 161-162
[363] Cueto et al., 2019: 104; Zimmer, 2017: 310-311
[364] Gladwell, 2002: 495; Packard, 2016: 160
[365] Cueto et al., 2019: 105; Packard, 2016: 160; Zimmer, 2017: 310-311
[366] Cueto et al., 2019: 104
[367] Cueto et al., 2019: 105

most of them had short-term effects while having to be distributed repeatedly and taken regularly. In countries with poor health infrastructure, it would have led to many logistical problems and was seen as impossible to carry out[368].

4.3.1.3 The Lack of Adaptability to Local Conditions

Even though the WHO acknowledged many of the problems mentioned above, it concluded that these issues were largely due to the wrong implementation[369]. These problems, together with issues of poverty, civil and political conflicts were listed along with the topography and annual rainfalls of the targeted areas, which were all seen as logistical conditions that the new medical technologies could overcome. Amrith points out that political violence or revolutionary movements were hardly ever mentioned in the reports, instead, they were just listed as "unrest" as the reason for why the spraying teams could not reach the area[370]. The failure of the WHO to improve or modify its strategy shows the MEP's inflexibility[371]. This is another example of the Global North's feeling of superiority, especially concerning its knowledge. Instead of reconsidering its strategy and working together with local populations in order to adapt it to local conditions, it blamed them for wrongfully implementing the strategy. Edward Said's and Dipesh Chakrabarty's concepts can both be observed in this case.

However, this does not mean that there were no modifications to the strategy. Many of the countries that succeeded in malaria eradication did so because they adjusted and modified their programs, for example Taiwan[372]. Amrith also mentions Taiwan and explains the reason for its success in malaria eradication was a specific combination of conditions, such as a well-developed rural health care system, well-trained and enough staff members, and the mechanism for finding remaining malaria cases was developed by local experience[373]. This proves the point that the WHO's feeling of superiority and reliance on its entrenched strategy was in the way of improving the MEP, and that the Global South was very well capable of adapting the strategy to local circumstances.

Packard notes that the MEP was based on a considerably limited set of experiences, which was problematic due to the variety of malaria in different locations in terms of epidemiology. Using mathematical formulas in technical assistance was widely common by economists,

[368] Cueto et al., 2019: 104
[369] Packard, 2016: 163
[370] Amrith, 2006: 127-129
[371] Packard, 2016: 163
[372] Packard, 2016: 163
[373] Amrith, 2006: 166

demographers as well as public health authorities to demonstrate the successful outcomes of their interventions. Packard claims that through these formulas, there was a false sense of confidence in technical assistance. According to Packard, the mathematical formula by the British epidemiologist George MacDonald concealed the complexities of fighting malaria and presented a wrongful impression of uniformity[374].

Amrith describes the WHO as a narrow technical organization trying to fix social problems with technical solutions[375]. Packard as well as Farmer and his colleagues agree as they claim that the MEP had a top-down approach, using the same strategy for every region of the world with little room for variation. Local personnel received orders from the WHO and were discouraged from modifying and innovating the strategy when it was not working well in their countries[376]. The technical advisors of the WHO insisted that the strategy had to be followed as closely as possible in all targeted areas. Packard also mentions that the WHO did not put in much effort to identify possible problems beforehand, let alone to develop strategies to deal with these problems[377].

This description of the MEP sounds remarkably familiar to the colonial medical campaigns described in the previous chapters. It seems like the same idea of a top-down strategy with little local cooperation was used for the MEP. It was successful before, however, the local cooperation back then was established through compulsion and authority by colonial officials. In the 1950s, this kind of control was not available anymore and it seems like for the MEP, local cooperation and local conditions were not thought through enough. Instead of taking advantage of local knowledge, it was suppressed like in the colonial campaigns back in the day.

Packard explains that there was also little time invested in research for the MEP. There was enough faith in the formula as well as the power of DDT, which led to the downplay of addressing local problems and further research[378]. Amrith explains that the global health field in the 1950s, in which malaria played a central role, appeared to be extremely self-confident about its scientific and technical knowledge and progress. He criticizes this attitude and describes the scientific knowledge used in the MEP as not being critical or sceptical, and thus as unscientifically optimistic compared to “real” science. It was believed that the MEP as well

[374] Packard, 2016: 155-157
[375] Amrith, 2006: 190
[376] Farmer et al., 2013: 63 and 67; Packard, 2016: 155-156
[377] Packard, 2016: 158-159
[378] Packard, 2016: 158-159

as other global health campaigns at the time were universally effective and therefore would be successful regardless of local conditions[379].

In this context, Farmer and his colleagues mention that out of the two possibilities of either combating the malaria parasite in the human host or combating it in the Anopheles mosquitoes, the latter was chosen for the MEP. They explain it was believed that vector control, such as using pesticides in houses and fields, draining breeding sites, or distributing insecticide-treated bed nets, could be carried out in areas without strong health services and without the full cooperation of the population. That is why this approach was also preferred by colonial authorities in the early 20th century. They also add that the Cold War played a role in preferring an eradication program over a more broad-based approach, as political leaders of the West favoured a vertical, disease-specific approach[380].

4.3.1.4 The Problem with Africa

In the 1960s, "development aid" was gaining more and more importance internationally, which also influenced the global health field. Additionally, the geographic focus of global health policies changed. While at first the focus was strongly on Asia, it shifted to Africa during its decolonizing wave starting in 1957 with Ghana. The WHO focused more on questions of basic health care, especially drinking water, and other challenges that sub-Saharan Africa had to face. Many diseases, which were controlled or eradicated in other parts of the globe, were still highly prominent in Africa[381].

However, eradicating malaria, which was the most important issue in the 1950s and 1960s, was not pursued anywhere near as heavily in sub-Saharan Africa than in the rest of the world. The strategy to eradicate malaria was meant to be implemented globally. It was known that there were great differences in the areas, however, it was believed that the "wonder weapon" DDT could easily balance out these differences. Nevertheless, experts were not sure about sub-Saharan Africa[382]. Packard mentions that Paul Russell, as well as the epidemiologist George MacDonald, who established the mathematical model for the WHO's malaria eradication strategy, agreed that malaria eradication in Africa would not be possible for several years[383]. According to Cueto et al., Russell therefore suggested to exclude parts of Africa from the MEP

[379] Amrith, 2006: 147-148; 180
[380] Farmer et al., 2013: 63-65
[381] Zimmer, 2017: 278
[382] Zimmer, 2017: 282
[383] Packard, 2016: 139

and to instead launch a few pilot programs until sub-Saharan Africa was ready for eradication, to which the WHO agreed to[384].

Especially former colonial doctors were against launching eradication programs in that area due to the population losing its immunity against the disease. If the program did not work and malaria came back, it would strike much stronger. However, this argument had also been used by colonial powers since the 19th century in order to justify its inactivity. In addition to that, it was known in the 1950s that 25% of child mortality in Africa was due to malaria, which was why not doing anything was out of question[385].

Malaria eradication in Africa was much more difficult than in other places of the world. It was usually not possible to stop transmission, which was due to the walls of clay huts absorbing the DDT, the lack of a basic health care system, many inaccessible, rural areas, and a high nomadic population[386].

These problems also arose in many other areas in which the MEP was launched. The difference to sub-Saharan Africa, however, were the specific characteristics of the mosquitoes in that area[387]. The main mosquito was the *Anopheles gambiae*, which had the longest lifespan, only fed off human blood, and stung a new victim every two days. Compared to India, in which the *Anopheles culicifacies* was dominant, there was a huge difference. While in India, an infected person infected 1.4 people on average, an infected person in sub-Saharan Africa infected between 1.000 and 2.000 people. In addition to that, there are three different types of malaria, which differ in the course and effects. In Africa, the deadliest type of malaria was most common. Therefore, a dangerous combination of the deadliest pathogen and the perfect vector was present in sub-Saharan Africa[388].

Even though the MEP planned to include Africa, it was known from the beginning that it was not possible to launch eradication campaigns in that area. Instead, pilot projects were launched and from 1960 on, the WHO introduced pre-eradication programmes especially for sub-Saharan Africa. These programmes focussed on creating basic infrastructure and training personnel. The transition from the pre-eradication to the eradication program, however, happened in hardly any of the 30 African states that were included[389].

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[384] Cueto et al., 2019: 97
[385] Zimmer, 2017: 280-282
[386] Packard, 2016: 139; Zimmer, 2017: 282
[387] Gladwell, 2002: 484; Packard, 2016: 139; Zimmer, 2017: 279
[388] Zimmer, 2017: 282-283
[389] Zimmer, 2017: 283-284

All in all, the WHO had the goal of globally eradicating malaria with the MEP, however, it excluded Africa, in which malaria was occurring heavier than anywhere else, due to its difficult starting position[390]. This example of Africa shows again that the West acted in its own interest, focusing on areas with high success rates instead of focusing on globally improving the well-being of all people.

4.3.2 Donor Fatigue

Another reason for the downfall of the MEP was the so called "donor fatigue" among important financial contributors due to the program being lengthier and more expensive than expected, and the decreasing faith in the power of DDT. The international support of the MEP significantly declined in the mid-1960s. Therefore, the budget of the WHO decreased as well, and it was not able to continue the campaigns to the same extent as before[391]. Besides the decreasing multilateral support, the US also reduced its financial support for malaria eradication. This was especially devastating for India. India was not able to finance the project on its own due to economic, financial, and political problems, its focus on the industrial sector, and a food shortage resulting in a famine[392].

Amrith adds that these shortages of DDT, due to donors reducing their support at such a crucial moment, were the reason for the resurgence of malaria in India, according to an investigation of the 1980s. He highlights that the technologies for disease control were effective, it was not their failure but the lack of availability that led to the downfall of the MEP. Additionally, the Indian government claimed that in areas with well-developed rural health services, malaria did not return and was kept under control, in contrast to areas with poor rural health systems[393].

This backs up the arguments of Karl Evang, who highlighted the importance of rural health services and claimed that no eradication programme should be introduced until basic health services existed in the targeted countries[394]. There were more critics of Soper's aggressive tendencies in the mid-60s, for example Carlos Alvarado, who led the Malaria Division. He disliked the in his eyes exaggerated focus on spraying operations and wanted the program to be more flexible, adaptable, research-focused, and embedded into rural health infrastructures[395]. Even though only a few WHO members were as openly sceptical as Evang and Alvarado at the

[390] Cueto et al., 2019: 97-98; Zimmer, 2017: 284
[391] Cueto et al., 2019: 108; Zimmer, 2017: 312
[392] Amrith, 2006: 169; Zimmer, 2017: 313-314
[393] Amrith, 2006: 168
[394] Amrith, 2006: 169-170
[395] Cueto et al., 2019: 101

time, their criticism of vertical disease eradication programs did reflect a more general trend within the thinking of global health[396].

Reason for the decreasing support of the US was a shift in foreign aid in 1963. There was criticism about the increasing foreign aid budget and a lot of domestic political pressure. Therefore, the foreign aid budget was cut and focused only on certain areas, of which health was not a part of[397]. Cueto and his colleagues add that the decline in the US budget for malaria eradication was also linked to Cold War politics. The US realized that its massive contribution to malaria eradication had not been effective in preventing the spread of communism. In addition, malaria eradication was not successful. Therefore, the US dedicated itself to unilateralism and cheaper health interventions[398]. This once again shows the motives of self-interest of the US that led to its enormous contribution to the program.

The US decided to support the campaign against eradicating smallpox instead. There was increasing criticism on the US due to the Vietnam War, which resulted in a decrease in prestige for the US. Once again, the global health field was seen as the perfect ground to improve its reputation with small effort and rapid results. Also, the US could prove that it was still part of international cooperation. The focus, however, was not on malaria anymore. Instead, a new field of action was chosen[399].

Also, some donors were convinced that fighting malaria was successfully completed. Malaria was eradicated in many countries, especially in all "developed" countries, which was seen as a great victory by the Global North. This thought was not only representing the ignorance of Western countries, but also shared by some governments of the Global South. They refused to continuously use their small budget for malaria, which was perceived as less dangerous than before. In addition, more and more inhabitants refused to grant the spraying teams access to their homes[400].

Amrith explains that after the Second World War, there was a rapid decline in mortality rates around the world, which coincided with the most intensive stage of global health campaigns[401]. However, there were different opinions about whether the MEP had failed or succeeded. This dichotomy in opinions was due to the fact that malaria was pushed back, but not fully

[396] Amrith, 2006: 169-170
[397] Zimmer, 2017: 317
[398] Cueto et al., 2019: 112
[399] Zimmer, 2017: 318
[400] Zimmer, 2017: 319-320
[401] Amrith, 2006: 179

eliminated. Zimmer explains that the glass was half full, but also half empty[402]. There was a lot of frustration because the final step to full malaria eradication was unsuccessful in many areas. Zimmer and Packard both claim that this is the reason for the pessimistic view on the MEP. It was believed that only the full, worldwide eradication could be deemed as a success. This coincides with the mindset of Soper, who believed the program would only be successful if it reached its ultimate goal. The fact that 26 out of the 50 countries of the MEP were able to fully eradicate malaria and globally, the cases of malaria had been drastically reduced, was not celebrated. Instead, the fact that malaria was still existing was used to describe the MEP as a failure[403]. Amrith as well as Cueto and his colleagues agree that despite the many obstacles and setbacks of the MEP, it achieved tremendous success in terms of reducing illness and mortality in the Global South[404].

Amrith explains that global health organizations, such as the WHO, had only a limited amount of power and control over people, nature, and post-colonial states. The power the WHO had was fragile and was based on image and enthusiasm, which meant it was not sustainable in the long-term. He explains that even at its highest point, during the enthusiasm of the new utopia of disease eradication, it had always been fragile and afflicted with various fears[405]. Zimmer agrees by explaining that the nations of the world were willing, under certain circumstances, to provide a massive amount of resources. This was the case directly after the Second World War, when there was the expectation that public health would lead to world peace, or in the mid-1950s, when it was seen as an instrument to modernize the Global South. However, these constellations were only for short periods of time which were not influenced by international health policy[406].

It is important to mention that even though the WHO campaigns against specific diseases, like malaria, were successful in reducing the cases and mortality rates around the world, diseases without global campaigns against them were still a huge problem in the Global South. Amrith takes diarrhoeal diseases as an example, which were not able to be controlled with the "magic bullets" and remained a detrimental issue in Africa and Asia[407]. Cueto and his colleagues agree as they mention that local health personnel had to divide their work between general hospital care, malnutrition, and diseases such as yaws, leprosy, tuberculosis, yellow fever, smallpox,

[402] Zimmer, 2017: 321
[403] Packard, 2016: 152; Zimmer, 2017: 320
[404] Amrith, 2006: 150; Cueto et al., 2019: 112-113
[405] Amrith, 2006: 187
[406] Zimmer, 2017: 339
[407] Amrith, 2006: 185

trypanosomiasis and so on. To them it seemed hard to believe that malaria eradication was the key to improved health[408]. In addition to that, poverty also continued to be a huge problem for Third World populations. Amrith therefore describes the situation as a paradox, with campaigns against specific diseases on the one side, and untouched problems on the other side[409].

Vertical disease campaigns can be traced back to colonial times, where the focus was mostly on the health of the Europeans. As mentioned in the chapter about the origins of the global health field above, the goal was not to improve the overall health situation in the targeted countries, but to only target specific diseases which seemed most urgent to colonial officials. Colonial medical campaigns were mostly based on external interests instead of the interests of the colonized populations. While at first, the goal was to solely protect the health of the Europeans in the colonies, it expanded to the local labouring populations. The reason for this expansion, however, was that the Europeans needed a strong workforce to carry out their own interests by extracting economic resources. This reason coincides to an extent with the reasons for the MEP, where economic development did play an important role, and external interest were clearly at play.

Taking the hookworm campaigns of the Rockefeller Foundation in the 20th century as an example, vertical disease campaigns were preferred because sanitary activities needed time, money, and an understanding of local populations and their living conditions. As it is explained above, the officials of the Rockefeller Foundation believed in the power of biomedicine and wanted fast results, which is why a broader-based approach to health was pushed to the background. Looking at the MEP, this sounds quite familiar as the WHO believed in the power of DDT and therefore pushed other approaches to the back.

4.3.3 Fear of Population Growth

A reason of the scepticism of combating infectious diseases in the Global South was the fear of population growth. The topic of population growth was too polarizing when it first came up, however, it caught momentum again in the 1960s[410]. Through new, cheap technology, such as the IUCD and the contraceptive pill, fertility could now be controlled[411]. The elites of most countries of the Global South, especially India, believed in a limitation of population growth as well. In India, population control and combating malaria had the same goal and were both seen as "development programs". The West, however, formed the opinion that those two fields were

[408] Cueto et al., 2019: 106
[409] Amrith, 2006: 183
[410] Zimmer, 2017: 323-325
[411] Amrith, 2006: 172

contradicting each other. William Vogt, for example, claimed that saving people from malaria would only result in a slower death by starvation. These thoughts were not only present in the minds of academic outsiders, even the deputy director of the FAO had a critical stance concerning the activities of the WHO[412].

Zimmer explains that Neville Goodman, for example, reflected on this topic in his book in 1952. He considered that people saved from malaria would maybe die in world wars or starve due to over population. He questioned if those were worse fates[413]. Amrith also mentions the negative language of population control and describes it as devaluating human life, for example by claiming *"a birth averted is money saved"*[414]. However, health politicians countered this criticism and emphasized saving lives as a moral obligation. Also, the WHO claimed that taking care of the health of populations led to an increase in productivity, which was more important than the effects of population growth[415].

However, in the 1960s, there was a shift in which global population growth was perceived more and more as a threat, creating the fear of a "population explosion". It was believed that disease control campaigns led to an unsustainable level of population growth[416]. Zimmer adds an important point by claiming that for the West, the growth in itself was not the only problem, but that it happened mostly in the Global South[417]. Just like in colonial times, the West appeared to fear the populations of the Global South, who were seen as "backward", "traditional" "savages" needing to be controlled. This strongly coincides with the concept of Othering because the Global North seemed to assign its own population a higher value than the population of the Global South. They would rather let people die than offer them medical assistance due to their own fears and their self-imposed higher value.

Amrith and Zimmer uncover that the West therefore financially supported programs in many countries of the Global South, for example the 8 million forced sterilizations in India in 1976. Population growth was seen as an obstacle to economic development and as a threat for surviving in general. All activities which were claimed to add to this problem, such as health policies, were under a lot of pressure to justify their programs[418].

[412] Zimmer, 2017: 325-327
[413] Zimmer, 2017: 327
[414] Amrith, 2006: 174
[415] Zimmer, 2017: 327-328
[416] Amrith, 2006: 171 and 182; Zimmer, 2017: 328
[417] Zimmer, 2017: 329
[418] Amrith, 2006: 173; Zimmer, 2017: 329-330

The Indian president Jawaharlal Nehru commented on the population debate that by thinking in statistical ways, it is often forgotten that these statistics represent human beings. He pleaded for people of the Global South to be treated as human beings who should be included, convinced, and won over instead of being decided upon. In general, Amrith explains that the focus was not on the opinion and participation of the populations of the Global South, but on the ability of global organizations to target certain diseases. The goal was to provide well-being to as many people as possible while incurring the least possible costs. With this logic by population theorists, population control seemed like a better choice than public health[419].

4.3.4 Criticism of DDT

There was a lot of doubt about the connections of improved health and improved productivity, which was one of the most important motives of malaria eradication. In addition, Amrith, Zimmer, and Cueto and his colleagues mention that there was an increasing criticism of the massive use of insecticides due to not knowing its effects on humans and the environment[420]. There was a new wave of ecological thinking, initiated by Rachel Carson's book published in 1962 about the negative ecological effects of DDT on the wildlife and aquatic ecosystems, which achieved the goal of prohibiting the use of DDT by 1972. The use of DDT was not over immediately, but Western countries were convinced that the massive use of it was irresponsible[421].

In this context, Zimmer and Cueto and his colleagues mention an important point: the nations of the Global South strongly disagreed with this new ecological movement. In 1969, the Regional Committee for South-East Asia got together and discussed the topic of DDT. Even though they did criticize DDT and acknowledged its toxicity, they were worried about combating malaria without the most important weapon against it. They thought that searching for alternatives was important, but until then it was better to die of cancer in old age than to die of malaria as a child. Until there was no proof of the potential health damages of DDT to humans, the Global South wanted to continue with the use of DDT. They argued that while industrialized countries had good reasons to limit the use of DDT, the Global South was still dependent on it since malaria kept on posing a serious health risk for the populations. There were similar arguments by other countries of the Third World at the 38th World Health

[419] Amrith, 2006: 190
[420] Amrith, 2006: 170 and 188; Cueto et al., 2019: 107; Zimmer, 2017: 332
[421] Cueto et al., 2019: 107; Gladwell, 2002: 481-482; Zimmer, 2017: 332

Assembly. However, the prestige of DDT could not be restored and in 1977, the US stopped exporting DDT to the Global South[422].

This once again shows the arguments of Spivak's concept of Subalternity, in which the voices of the Global South were not considered, but instead it was spoken and decided on their behalf. The Global North believed in its superiority concerning the scientific knowledge on DDT and therefore did not consider the opinions of the countries of the Global South, which classifies as one of the many examples of Eurocentrism.

At that time, "development projects" were criticized in general due to their goal of modernizing nations of the Global South. It was seen more and more as an arrogant ethnocentrism and there was a lot more self-criticism by the Western world in the 1960s and 1970s. It was questioned whether the projects intended to truly support the Global South, or if the Global North just followed its own interest, as James Ferguson used the term "development machine"[423].

Zimmer mentions that concerning this criticism, there was an overlap between Western critics and representatives of the Global South. However, only the representatives of industrial states expanded this criticism onto the global health field. They spoke for the countries of the Third World while criticising the MEP. However, the representative of the Indian government, for example, did not pick up this argument and instead emphasized the benefits of the NMEP[424].

The reaction of the WHO to the increasing criticism was always the same, it stuck to the reasoning of improving economic development and highlighted its calculations of lost workdays due to malaria. However, these numbers lost its impression and there were more and more questions to the WHO about the actual effects of the MEP. From the 1950s on, the WHO tried to prove the connections between eradicating malaria and increased economic growth. However, there were no actual numbers to back this claim. In many countries, there was simply no data about the economic effects of malaria control, and in other places with data there was no proof of a causal relationship between economic development and the WHO programs. Due to the lack of fundamental evidence, the appeals of the WHO seemed less and less plausible[425].

Cueto and his colleagues claim the WHO did criticize its method of disease control, especially the separation of malaria eradication services from local health services. It also aimed to improve its mechanisms for malaria surveillance. The authors explain this outcome with the

[422] Cueto et al., 2019: 108-110; Zimmer, 2017: 333-334
[423] Zimmer, 2017: 334-335
[424] Zimmer, 2017: 336
[425] Zimmer, 2017: 337

retirement of the older generation of malariologists, for example Soper, Candau, and Russel. The amount of malariology experts decreased, and the mindset of the field started to change, which meant that malaria eradication was abandoned. It was acknowledged that the development of basic health services was a requirement for mass campaigns to be successful, and that there needed to be a close connection between the eradication campaigns and the local health systems. However, even though the MEP was not successful in fully eradicating malaria, the concept of vertical eradication programs did not completely disappear. There were efforts to modify the techniques of vertical programs and apply it to other infectious diseases, such as smallpox[426].

[426] Cueto et al., 2019: 110-111 and 114

5 Conclusion

The introduction of this thesis presents one main research question about the Malaria Eradication Programme of the WHO, as well as two sub research questions about the beginnings of the global health care field in the colonial era. These questions are answered in the course of this thesis and the findings are summarized again in this conclusion. Before discussing the main research question, the sub-questions about the colonial era are answered and lay the groundwork for the analysis of the MEP.

Concerning the beginnings of global health interventions, the historians covered in this thesis share the same view. They all start with increased trade activities that led to a rise of new diseases, threatening the health of colonial officers. Therefore, standardized international regulations were enforced at the International Sanitary Conferences in the 19th century, which were an important milestone in the field of international public health. While at first, interventions focused on social and economic determinants of health, there was a shift during the golden age of bacteriology. Due to new scientific knowledge about diseases, the focus shifted to large-scale disease elimination programs. Newly founded international organizations, such as the League of Nations and the Rockefeller Foundation, carried out these programs. Due to the Great Depression in the 1930s, the link between health and socio-economic factors became more obvious, which led to another shift back to a broader based approach to international public health. However, large-scale disease elimination programs were still dominant in the international health field due various reasons such as cost-effectiveness and fast results.

The concepts described in the theoretical part of this thesis can be seen very clearly all through the history of international health policy. There are countless examples of Othering, starting with the International Sanitary Conferences when cholera was referred to as the "Asian disease". Indians were blamed for the outbreaks of this disease and were seen as "unclean", "uncivilized", and "primitive". In many cases, the local colonial population was described as "incapable", "dependent", "backward", "traditional", and "living in filth". The colonial powers saw themselves and their health as superior, which is why they focused on eliminating diseases which were a threat to their health, without considering the intrusiveness of their methods. Their sole focus was the protection of the health of the Europeans, while the local population was rarely involved and in many cases was forced to obey their measures. The Europeans also segregated themselves physically from the local citizens, not only for medical and economic advantages, but also to demonstrate their superiority.

The concept of Provincializing Europe by Dipesh Chakrabarty is also quite present. For example in the Philippines, the research of Filipino scientists in the 1880s was not considered by the US, which shows the conviction of superiority of the US as a colonial power. In addition to that, Coghe highlighted the cross-cultural exchange of medical knowledge. African medical practices had existed long before colonial rule and were highly valued. International health care was not just an export of Western medicine, instead it also went the other way. African healers were often seen as more knowledgeable concerning tropical diseases and trusted by the Europeans, at least up until the golden age of bacteriology. Coghe's argument is also connected with the concept of Hybridity by Homi Bhabha, as he describes the creation of new forms of medical treatments. Hybridizations of different medical systems was both necessary and allowed patients to benefit from better medical care.

Before 1945, the LNHO and the Rockefeller Foundation were the biggest organizations in the international health field. While Thomas Zimmer focuses more on the positive aspects of the League of Nations, such as its global reach, its use of independent experts instead of government officials, and its function as a role model for future organizations, Packard and Farmer et al. focus more on the limitations of the organization. Their critique is not only negative, as they mention the increased efficiency and geographical scope, as well as the clear distinction of the ideas in the 1930s. However, they shed light on the overly optimistic attitude of the LNHO, its belief of superiority over local practices due to its institutionalization, as well as its one-size fits all approach. On top of that, both Packard and Farmer et al., as well as Sunil Amrith, point out the strong financial connections to the Rockefeller Foundation.

The Rockefeller Foundation is generally described as an outstanding, influential, and significant organization which achieved tremendous success in the international health field. However, its disease eradication campaigns are heavily criticized by various historians. Zimmer describes them as top-down approaches, planned by "experts", while colonial populations solely provided the manpower to carry them out. He also claims they were an American project, since the focus was on protecting the health of the US population. Farmer et al. and Packard agree as they claim there was no interest in addressing the underlying causes of diseases because the main goal of the colonial states was to improve their economic efficiency as cheaply and widespread as possible. They also criticize the narrow colonial view of the campaigns. Packard goes more into detail about many cases of Othering happening in the different campaigns of the Rockefeller Foundation. He claims there was a deep colonial entanglement, as colonial officers were employed to lead international health campaigns. In addition, the schools of the Rockefeller

Foundation facilitated an increased exchange between colonial medicine and international health organizations.

All in all, the campaigns of these international health organizations were mostly top-down approaches with a technical, narrow view of health and strongly influenced by colonial knowledge frameworks.

The main research question deals with the continuities of colonial structures in the Malaria Eradication Programme of the WHO, of which plenty are uncovered in the course of this thesis. The continuation of colonial thoughts and ideas can be seen in the choice of personnel for the MEP. Marcolino Candau and Frederick Soper, for example, were both trained at schools of the Rockefeller Foundation and therefore had a common view of disease control campaigns. Especially Soper was in favour of strict military-style campaigns without local cooperation and was known for his fanaticism and absolutism. People like Candau and Soper carried the colonial mindset of top-down disease eradication campaigns and racist attitudes towards local populations into the MEP.

During that time, the modernization theory was quite prominent in the development field in general, which also influenced the field of global health care. It was believed that military-like eradication campaigns would lead to "modernization". As mentioned in the theoretical framework, Nils Gilman explained that the present of non-Western countries was seen as the past of Western countries, believing that the Global South had to take the exact path as the Global North. The concept of Provincializing Europe by Dipesh Chakrabarty can clearly be seen in this dichotomous way of thinking, as the West is described as a role model for the rest of the world and the history of non-Western countries was not considered at all. Western medical science was seen as superior, it was even believed that without the technology of the Global North, the Global South would not be able to develop at all. As Cullather mentioned in the theoretical framework of this thesis, all "traditional" societies were seen as uniform, no matter in which part of the world they were located, and their history was not considered. The concept of Othering can also be observed, as "traditional" societies were described as "inferior" and "backward", while "modern" societies were the "superior" role model. Therefore, the feeling of superiority of the West remained, just like in the campaigns of colonial times.

Another point that runs through this thesis is the acting out of self-interest of the West, especially of the US. While it acted out of self-interest in colonial times by fighting diseases in

its colonies in order to protect its own citizens from diseases like yellow fever and cholera, it strongly contributed financially to the MEP due to Cold War interests.

An abundance of colonial legacies can also be observed in the implementation of the MEP. Many campaigns failed after the attack phase due to the lack of basic health care systems. Due to Western ignorance and the belief in the superiority of Western technology, it was presumed that a basic health care system in the targeted countries was simply not needed. Just like in the golden age of bacteriology, when it was believed that all problems could be solved by biomedical disease campaigns, the same mindset could be found in the MEP concerning DDT.

Another similarity can be found in the hierarchical structure of the program. Local workers were included into the MEP, however, they were only used for field work, while experts from the WHO were in charge. The local workers had to follow a strict routine and were not welcome to voice their opinions about adapting the program to local conditions. There is a clear dichotomy in knowledge, like the concept of Provincializing Europe suggests, because local knowledge was seen as inferior and was therefore dismissed. There is not much difference in the way the local populations were described as in the MEP compared to campaigns in the 20th century. In the MEP, they were still seen as "dependent", "incapable", "ignorant" and "backward", and cultural differences were dismissed as "irrational traditional beliefs". These descriptions are quite similar to the ones of the yellow fever and hookworm campaigns of the Rockefeller Foundation in the 20th century, which were described above. There was still a clear distinction between "us" and "them", and a feeling of superiority over the local populations, which fits well into the concept of Othering. The description of indigenous populations as "uncivilized", "unhygienic", and "primitive", run through the history of international and global health interventions.

Many problems arose due to the lack of preparation and consideration of local circumstances, such as population movements and different kinds of construction. However, instead of reconsidering and modifying its strategy, the WHO blamed the local populations for wrongfully implementing the strategy. This is another example of the feeling of superiority concerning Western knowledge, which fits well into the concept of Provincializing Europe. Countries like Taiwan proved that when locals were able to modify the strategy, the Global South was capable of successfully adapting the strategy to local circumstances.

The historians covered in this thesis describe the MEP as a narrow, top-down approach attempting to fix social problems with technical solutions. The same strategy was used in every

region of the world, just like in the colonial medical campaigns described above. In the 20th century, colonial authorities preferred vertical disease eradication campaigns because they could be carried out in regions without strong basic health care systems and without the full cooperation of the population. Not much had changed for the MEP. For colonial officials, the goal was not to improve the overall health of the population, but to target specific diseases out of self-interest. For the MEP, external interests were clearly at play as well, because the Global North noticed that it could not divide the world into "sick" and "healthy" anymore due to the increase of global interconnectedness. Eradicating only specific diseases is described as a bit of a paradox, as there are so many other pressing health issues that remain untouched.

Colonial legacies can also be observed in the reasons for the end of the Malaria Eradication Programme. While the Global South saw combating malaria and population control as two individual goals, the Global North believed those two goals were contradicting each other. The issue was mostly that the population growth happened in the Global South, which was full of "backward", "primitive" peasants. Just like during colonialism, the West seemed to accredit its own population a higher value, which strongly coincides with the concept of Othering. Another important point in this context is the criticism of DDT and of development programs in general in the 1970s. While the Western critics and the critics of the Global South agreed on the topic of development programs, the Global South did not criticize the global health field. Additionally, the Global South wanted to continue using DDT until there was proof of its toxicity and an alternative to use. However, its opinion was not considered by the West. This again coincides with the concept of Provincializing Europe, as the West thought its own knowledge and opinion was worth more than that of the targeted countries, as well as with the concept of Subalternity, because the voices of the Global South were not considered.

All in all, a number of colonial legacies can be observed in the Malaria Eradication Programme of the WHO. It is important to acknowledge and discuss the colonial origins of malaria programs, since the development of malaria control as well as malaria research was closely linked to colonialism. The goal is not to reject all knowledge gained in colonial times, but to recognize, question, analyse, and discuss it openly. As Jesse Bump and Ifeyinwa Aniebo put it:

"Although few or none in global health today would identify in support of the colonial project, the roads on which we all walk were built for extractive purposes and still embody unquestioned inequalities of power and privilege"[427].

[427] Bump/Aniebo, 2022: 9

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