

**HISTORICAL EFFECTS OF THE BUBONIC
EPIDEMIC IN LAGOS: 1924-1959**

BY

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CERTIFICATION

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DEDICATION

This thesis is dedicated to the Almighty God.

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LIST OF ABBREVIATIONS

AIDS	-	Acquired Immune Deficiency Syndrome
CMS	-	Church Missionary Society
COMCOL	-	Commissioner of the Colony Office Lagos
CSO	-	Central Secretary's Office
HIV	-	Human Immunodeficiency Virus
HPV	-	Human Papilloma Virus
LEDB	-	Lagos Executive Development Board
LWL	-	Lagos Women's League
MH. FED.	-	Federal Ministry of Health
NAI	-	National Archive Ibadan
PWD	-	Public Works Department
STDs	-	Sexually Transmitted Diseases
WHO	-	World Health Organisation

LIST OF FIGURES

Figure 1: A Map of Lagos in 1924	55
Figure 2: A map showing Plague hotspots in Lagos and environs, 1924 -1931	104
Figure 3: A map of Lagos in the 1950s	194

LIST OF TABLES

Table 1:	Population Growth in Colonial Lagos	93
Table 2:	Cases of and deaths from Plague in Lagos fortnightly and the percentage of infected rodents in 1924	99
Table 3:	Official Estimates of Rat Plague in Lagos, 1925-1929	100
Table 4:	Plague Morbidity in Lagos, 1924-1931	101
Table 5:	Plague Cases and Deaths fortnightly in Lagos Environs between 1925 and 1926	107
Table 6:	Plague Morbidity and Mortality in Lagos, 1924-1931	177
Table 7:	Annual Revenue Estimates, Nigerian Railways, 1923-1930	178
Table 8:	Plague Expenditure, 1924 and 1925	180
Table 9:	Annual Estimates, Medical and Sanitary Expenditure, 1923-1931	181
Table 10:	Volume of Principal Exports at the Lagos Port, 1924-1932	186
Table 11:	Value of Principal Exports at the Lagos port, 1924-1932	187

ABSTRACT

Studies on the history of disease occurrences, control and management within the humanities is a recent development. This thesis examined the history of Bubonic Plague in Lagos from the initial outbreak in 1924 up to 1959. The Bubonic Plague in Lagos between 1924 and 1959 accounted for a total of 1,947 cases with 1,813 deaths. This thesis examined the history of Bubonic Plague in Lagos from the initial outbreak in 1924 to 1959 when the pandemic was considered inactive by the World Health Organisation (WHO). While the peak of the virulence was marked in 1928 with 519 cases and 509 deaths, its lowest ebb was witnessed in 1931 with 5 cases and 5 deaths. Few existing studies on Bubonic Plague have focused on the geographical and biomedical dimension of the epidemic in Lagos thereby neglecting the humanistic socio-economic and cultural dynamics of the event. It is against this backdrop that this thesis examined the unprecedented historical landmarks created by colonial interventions and local responses to Bubonic Plague in Lagos. The objectives of this study were to: - (i.) examine the origin of transborder Bubonic Plague in Lagos; (ii.) historical pattern of transmission (iii.) evaluate colonial interventions and local responses, and (iv.) analyse the impact of the epidemic on the people of Lagos.

A historical methodological approach and qualitative research design were adopted for the study, based on archival records, oral interviews, newspaper reports and the literature.

The findings of this research were:

- (i.) Bubonic Plague was introduced to Lagos from the Gold Coast (Ghana) through transborder kola nut trade network in West Africa. The progression of the epidemic from Kumasi (Gold Coast) to Lagos (Nigeria) unveils a new pattern of disease process in the region brought about by globalization and European imperialism;
- (ii.) the rapid transmission and diffusion of Plague in Lagos was facilitated by colonial transportation and communication networks as well as animal reservoirs such as the black rats. Its endurance in the port city is due to the Eurocentric Urbanism that found expression in the segregation and social neglect of the native settlements;
- (iii.) colonial interventions included transborder disease surveillance and screening, quarantine measures, environmental sanitation, town planning and biomedical healthcare. On the other hand, local responses involved religious and ethno-medical diagnoses and treatment based on a widely accepted historically rooted alternative to colonial intervention and;
- (iv.) intercultural responses to plague led to the invention of a colonial epidemic landscape in policy and practice that was piloted by cultural preferences, economic and political concerns. Plague control in colonial Lagos brings to the fore, the impact of the fear of contagion on labour productivity, public expenditure, migration, trade, food security, built environment and social mobility.

The study concluded that the history of Bubonic Plague unfolded the shortcoming within colonial administrative machinery the distinct socio-spatial nature of public health praxis in Lagos. The study recommended the same pragmatic approach adopted in combatting the Ebola scourge in Nigeria in any epidemic outbreak.

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TABLE OF CONTENTS

Contents	Pages
Certification	ii
Dedication	iii
Acknowledgment	iv
List of Abbreviations	v
List of figures	vi
List of Tables	vii
Abstract	viii
Table of Contents	ix-xi

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study	1-8
1.2 Statement of the Problem	8-10
1.3 Objectives and Significance of the Study	10-11
1.4 Scope of the Study	11-12
1.5 Research Methodology	13-14
1.6 Conceptual Clarifications	14-16
1.7 Literature Review	16-39
1.8 Structure of the Thesis	39-41
Notes and References	42-52

CHAPTER TWO: PUBLIC HEALTH AND DISEASE PROCESSES IN LAGOS BEFORE 1924

2.1 Lagos and Her Peoples	53-56
2.2 Public Health and Disease Processes in Pre-colonial Lagos	56-62

2.3 Public Health and Disease Processes in Colonial Lagos before 1924	62-66
2.4 Influenza Epidemic of 1918-1919	67-72
Notes and References	73-79

CHAPTER THREE: ORIGIN AND DIFUSSION OF PLAGUE IN COLONIAL LAGOS AND ENVIRONS, 1924-1931

3.1 Origin of Plague in Colonial Lagos	80-87
3.2 Taxonomy and Symptoms	87-91
3.3 Transmission and Morbidity	91-104
3.4 Pattern of Plague Diffusion to Lagos Environs	105-107
Notes and References	108-117

CHAPTER FOUR: COLONIAL INTERVENTIONS AND LOCAL RESPONSES, 1924-1959

4.1 Transborder Disease Surveillance	118-120
4.2 Quarantine Measures	120-125
4.3 Environmental Sanitation	126-132
4.4 Town Planning	132-142
4.5 Biomedical Healthcare	142-147
4.6 Religious Interventions	147-159
Notes and References	160-175

CHAPTER FIVE: IMPACT OF BUBONIC PLAGUE ON LAGOS

5.1 Plague Mortality, Labour Productivity and Increased Public Expenditure	176-182
5.2 Plague and Trade	182-188
5.3 Politics of Town Planning and Social Inequality	189-196
5.4 Public Health Policies and the Subversion of Traditional Medicine	197-201

Notes and References	202-212
CHAPTER SIX: SUMMARY AND CONCLUSION	213-218
BIBLIOGRAPHY	219-248
APPENDICES	249-276

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Plague is a zoonotic disease caused by *Yersinia Pestis* bacteria transmitted through infected fleas and their rodents. The infected animals and their fleas function as reservoirs for the bacteria in an enzootic cycle. *Yersinia pestis* is transmitted to humans through the bite of fleas or contamination with infected fluid, tissue or droplets.¹ According to the World Health Organisation, 'as with many primarily zoonotic diseases, Plague is a very severe disease in people, with case fatality rates of 50-60% if left untreated'.² The various manifestations and symptoms of Plague include:

Bubonic Plague: Patients develop sudden onset of fever, headache, chills, and weakness and one or more swollen, tender and painful lymph nodes (called buboes). This form usually results from the bite of an infected flea. The bacteria multiply in the lymph node closest to where the bacteria entered the human body. If the patient is not treated with the appropriate antibiotics, the bacteria can spread to other parts of the body...Septicemic Plague: Patients develop fever, chills, extreme weakness, abdominal pain, shock, and possibly bleeding into the skin and other organs. Skin and other tissues may turn black and die, especially on fingers, toes, and the nose. Septicemic Plague can occur as the first symptom of Plague, or may develop from untreated Bubonic Plague. This form results from bites of infected fleas or from handling an infected animal...Pneumonic Plague: Patients develop fever, headache, weakness, and a rapidly developing pneumonia with shortness of breath, chest pain, cough, and sometimes bloody or watery mucous. Pneumonic Plague may develop from inhaling infectious droplets or may develop from untreated bubonic or septicemic Plague after the bacteria spread to the lungs. The pneumonia may cause respiratory failure and shock. Pneumonic Plague is the most serious form of the disease and is the only form of Plague that can be spread from person to person (by infectious droplets).³

The Plague in colonial Lagos was primarily bubonic. The increased transformation of the primary bubonic cases to other secondary forms (septicaemic and pneumonic) during the outbreak was largely due to ineffective biomedical treatment.⁴ This was a Bubonic Plague epidemic introduced to Lagos (Nigeria) from Kumasi (Ghana) by Hausa transborder Kola nut traders ‘during the period 5th May to 17th June [1924] when quarantine against the Gold Coast ports was raised’.⁵ Affirming the foregoing, the Medical Research Institute, Yaba, Lagos, observed in its Annual report in 1924 that ‘for the first time in its history, as far as records show, Lagos suffered from an epidemic of Plague. It occurred in the latter half of the year. The first definite case, bubonic in type, was found on 28th July [1924]. The disease was in all probability introduced by sea’.⁶

Globalization enhances the spread of infectious diseases due to the increased transborder microbial traffic caused by the rapid speed and volume of international migration and trade.⁷ Human migration has been active since *Homo-Erectus* migrated from Africa to other parts of the world about 300,000 years ago. The arrival of Europeans in America and Africa in the 15th and 16th centuries ushered in a period of mass intercontinental migration with health-wise implications. As noted by J.E. Inikori, ‘the Indians in the Americas were almost completely wiped out by the new diseases which the Europeans carried to the area’.⁸ The twentieth century marked an unprecedented volume and speed of international movement of people and commodities with its consequent transborder spread of infectious diseases such as Influenza, Bubonic Plague, and Ebola in West Africa.⁹ Thus, the dawn of the twentieth century witnessed an unprecedented landmark in the history of disease processes in Lagos as new infectious diseases were introduced through an expanding global maritime trade network. The focus of this thesis is the experience of the Third Pandemic Plague in Lagos from 1924 to 1959. This scenario is discussed as a peculiar experience within the global series of Plague Pandemics.

The pandemic of Plague had occurred at three different periods, that is, 541 to 850 AD (Plague of Justinian), 1347 to 1351 (Black Death), and 1855 to 1959 (Third Plague Pandemic).¹⁰ Disease process differs from one society to another. Hence, the experience of diverse people with Plague differs based on cultural differences and complexity. The dearth of scholarly writings on the unique experience of epidemics within the general pandemic necessitates the evaluation of earlier pandemics in order to create a historical background and comparison for the present study. The Plague of Justinian appeared in Pelusium in 541AD, near the delta of the Nile in Egypt and to Palestine and beyond, reaching Constantinople in the spring of 542AD. It continued to spread from one port city to another in the Mediterranean, later migrating inland eastward into Asia Minor and west into Greece and Italy.¹¹ It appears to have spread from major ports to the interior, and does not seem to have followed any seasonal pattern.¹² It was the first documented pandemic in history and marked the beginning of a series of Plagues that would afflict the world until the 21st century. The pandemic resulted in the deaths of about 50 million people.¹³ It occurred in the most populated and overcrowded settlements in Asia, the Mediterranean, and North Africa. The outbreak, which dated back to the year 541 has been traced to the city of Constantinople in ancient İstanbul in the Byzantine Empire. The mortality level of the epidemic was described in the primary records of Procopius, a historian at the court of Emperor Justinian I, who asserted that the outbreak almost destroyed the ‘whole human race’. This pandemic killed an average of 200,000 people in Constantinople amounting to about 40% of the population until it ceased in the year 542.¹⁴

The First Pandemic was an outbreak of Plague which occurred in the early Middle Ages and named after Byzantine emperor Justinian I (527–565) during whose rule the epidemic started and encapsulated the Mediterranean, the Byzantine Empire, the Middle East, Southwestern Europe, and northern Europe.¹⁵ It spread essentially along maritime

trade routes.¹⁶ The demographic effect of the outbreak led to a decline in manpower with a consequent higher demand for labour resources. Thus, labour became expensive and depopulation led to abundance of landed resources. Military operations declined as a result of inadequate foot soldiers. Culturally, the epidemic triggered spirituality and religious rituals such as the litanies, fasting, prayers, and processions in both the Islamic and Christian worlds. Indeed, at the failure of biomedicine, religion became the ‘opium’ of the masses triggering ecclesiastical movements and intervention like the Christian cult of St. Sebastian in Italy during the seventh century.¹⁷ Hence, the Plague of Justinian – the First Pandemic showcases the sociocultural impact of epidemic on ancient societies. This was the earliest account linking trans-regional trade with the spread of epidemics across political boundaries due to technological improvement especially in the area of navigation. It demonstrates the place of religion and culture in the understanding of disease processes and how this phenomenon structured human societies.

The Second Pandemic often referred to as the Black Death which occurred from 1347 to 1351 is the Plague that killed a third of the European population.¹⁸ It is regarded as the most devastating pandemic in European history, reaching its climax between 1348 and 1350. Emerging from China, it travelled and reached the Crimea by 1346, carried by Oriental rat fleas that reside on merchant ships; it spread throughout the Mediterranean and Europe. It triggered a series of religious, social and economic upheavals, which had profound effects on Europe over time.¹⁹ The transmission of the Black Death was facilitated by traders travelling across distinct territories. The rapid spread of the pandemic across Italy, Britain, Greece and Germany within a period of one year ensured its endurance and fatality in Europe. This was a diffusion of Plague through Europe that reached Italy in 1347. The taxonomy of the disease virulence was described in the *Decameron* written by an Italian writer named Giovanni Boccaccio who lived in Florence

during the outbreak. According to this account, the outbreak witnessed the development of buboes on the victim's body, especially in the 'groin or the armpits, which sometimes attained the size of a common apple or egg'. The buboes were reported to soon spread all over the victim's body after which it turns into 'black or lurid spots on the arms, the thighs and the whole person'. The mortality level in Florence was estimated to involve 80,000 inhabitants of the medieval city by 1348. In London, the severity of an outbreak of Plague in 1665 was described as painful and intolerable as 'people ran mad in the streets, raving and distracted, oftentimes laying violent hands on themselves, throwing themselves out at their windows, shooting themselves', and mothers killing their babies.²⁰

The Black Death marked a turning point in European history as the epidemic triggered major changes, including high depopulation rate with a mortality rate of an estimated 45 to 60 percent.²¹ The name Black Death evolved as a description of the terrible death suffered by the victims. The disease spread rapidly and has been traced to animal reservoirs in the Asian steppe region where it was transmitted through Mongol traders in the trade routes linking the Caspian and Black Seas. It was interpreted by the European society as a punishment from God. It impacted on the social fabric of society as family members abandon each other leading to a common motto associated with the epidemic – 'flee far, fast, and for a long time'.²² The high mortality rate led to the accumulation of bodies faster than they could be buried which put into motion various psychological reactions including self-blame, fear, sorrow, and anger.²³ Whereas the scientific discovery of Plague etiology was not uncovered at this point of history, nonetheless, societal disparity between the privileged and the masses led to the identification of the disease agency to the underdeveloped enclaves of urban centres thereby stimulating public health ordinances that associated epidemics with dirt and unsanitary spaces.²⁴

The Third Plague Pandemic of 1855-1959 first evolved in Eastern Asia and specifically from China's Yunnan province in 1855 where it spread to India around 1896 killing about 12 million people in a period of thirty years. The transmission outside mainland China has been associated with the opium trade link with Hong Kong.²⁵ The disease spread to diverse ports situated in different continents such as Hong-Kong (1894), Bombay and Mumbai, India (1896), Alexandria, Egypt (1899), Porto, Portugal (1899), Buenos Aires, Argentina (1900), Rio de Janeiro, Brazil (1900), Honolulu (1899), Sydney, Australia (1900), Cape town (1901),²⁶ Accra, Ghana (1908), Dakar, Senegal (1914)²⁷ and Lagos, Nigeria (1924).²⁸ Casualty patterns indicate that this pandemic was diffused around the world through ocean-going trade, transporting infected persons, rats, and cargoes harbouring fleas (Appendix A).²⁹

The Third Plague Pandemic reached Africa at the turn of the nineteenth century.³⁰ While Plague was uncommon to Sub-Saharan Africa before 1900, it was not a stranger to the North African enclave bordering the Mediterranean Sea. Indeed, both the Plague of Justinian (first pandemic) and the second pandemic (Black Death) had visited North Africa with high mortality rate. By 1899, Bubonic Plague had returned to Alexandria in Egypt. Anchored on the previous experience of the Egyptians with Plague, the Third Pandemic was not severe due to improved public health system, timely and adequate response. However, after 1899, Plague was transmitted from Alexandria to Port Suez, the Nile Delta, and Upper Southern Egypt where it killed 10,000 people by the 1930s.³¹ The pandemic spread to Cape Town from Argentina in January 1901 through maritime trade in horse-fodder. The earliest cases were recorded in the native African population. The white supremacist regime used this opportunity to evict most Africans from the urban centres to camp settlements such as New Brighton. The colonialist approach to the scourge was the association of Plague with native settlements and the destruction of native quarters.³²

In Senegal, the Pandemic appeared in 1914 and departed in 1945 with an estimated mortality rate exceeding 35,000.³³ Plague control in Dakar was conceived and resulted in the displacement of a considerable portion of the indigenous impoverished population.³⁴ Indeed, the earliest invocation of public health ordinance following the outbreak of Plague in colonial Lagos compelled the evacuation of native settlement categorized as Plague foci. A copy of such ordinance issued in September 1924 is attached as Appendix B.

While this thesis is founded on the thematic comparison of shared global experiences of Plague Pandemic, it specifically focuses on the peculiarity of its implications in the history of colonial Lagos. The Bubonic Plague in Lagos is a peculiar phase of the Third Plague Pandemic.³⁵ Specifically, this thesis analyses the outbreak and control of Plague in colonial Lagos and how this experience impacted the socio-spatial fabrics of the city overtime. This is a transborder transmission of Plague pathogens across national territories in West Africa due to global connectivity brought about by colonialism. While the Gold Coast had experienced an outbreak in 1908, a resurgence of epidemic Plague in Kumasi in 1924³⁶ vis-à-vis intra-regional maritime trade network between the Gold Coast and Nigeria ensured the transmission of the disease to Lagos in 1924. While earliest cases of Plague were detected by a native doctor³⁷, the first official case was diagnosed in Lagos on the 28 July 1924.³⁸

The Plague in Lagos witnessed a case-fatality rate of 94.02% accounting for the death of 1,813 people out of 1,947 official cases.³⁹ The average population of Lagos from 1924 to 1931 was 112,850.⁴⁰ The unpleasant impact of the epidemic led to corpse smuggling and abandonment of infected family members and friends in the emerging urban centre.⁴¹ Movement restrictions, harsh quarantine measures and the fear of infection led to the obstruction of trade networks and food insecurity.⁴² Governmental agencies like the

Nigerian Port Health Service and the Lagos Executive Development Boards (LEDB) evolved to combat the deadly scourge amidst racial politics.⁴³ All these emerged in the face of indigenous ethno-medical intervention and local protests against Plague-driven colonial urbanization enshrined in the supremacy of biomedicine and Eurocentric order. These dynamics are examined in tandem with the socioeconomic, medical, cultural, and environmental implications of epidemic Plague in Lagos from 1924 to 1959.

1.2 Statement of the Problem

The dearth of holistic historical writings on the Plague epidemic in colonial Lagos motivates this research work. While the study of epidemics is another phase of historiography relating to medical and environmental history, research in historical epidemiology within the Liberal Arts in Nigeria is a new development. Consequently, most of the existing studies on Bubonic Plague were based on case studies derived outside Nigeria. Indeed, the review of the existing literature and archival records show that significant episodes of this important event have escaped scholarly attention. The very few existing studies on the subject matter have focused on the geographical and biomedical study of Plague in West Africa thereby neglecting the humanistic socioeconomic and cultural dynamics of the event. Indeed, biomedical analysis of epidemics in Nigeria and Africa in general are weakly footed. This trend is noted by J.L.A. Webb in his article ‘Historical Epidemiology and Infectious Disease Processes in Africa’ published in the *Journal of Africa History*.⁴⁴ As J.L.A. Webb puts it:

There is much to do. The biomedical understandings of disease processes in Africa are frequently naïve, because they lack political, social, cultural and economic historical contexts. Africanist historians can develop these historical contexts in

ways that will be relevant to the practice of public health in Africa.⁴⁵

The present study seeks to fill this gap by adopting an eclectic approach to the subject matter with special emphasis on the negotiation between colonial public health regulations and local responses. Moreover, it provides new insights into the borderland history of West Africa through the examination of microbial related transborder dynamics. While the existing literature on border and borderlands studies emphasises the waning nature of state boundaries in West Africa due to transnational social spaces and globalisation⁴⁶, The historical study of the Plague in Lagos advances this discourse by opening up a new dialogue on the public health implications of this phenomenon in historical perspective.

Based on the foregoing identified problems, the following questions have arisen. What is the origin of the Plague of Lagos? This is addressed by tracing the transborder transmission of the epidemic to the international trade between the port of Lagos (Nigeria) and Kumasi (Ghana) both located in British West Africa. This involves revealing the transborder factors responsible for the introduction of the disease to the port city of Lagos in 1924. Who brought it to Lagos? This question is answered by unveiling the index case of the epidemic as well as its original mapping and timeline before 1924. This involves discussing on the nature of disease processes in pre-colonial Lagos and how colonialism did alter this order as well as the consequences of this scenario.

The foregoing leads us to another question; how did it spread? This examines the environmental, economic as well as socio-cultural factors responsible for the transmission of the Plague in colonial Lagos. Issues such as hygiene, sanitation, medical care, religion, trade, and culture will be discussed in this regard. How did government and society respond to the epidemic? What are the control measures adopted? This question is

answered by discussing the various colonial interventions and local responses among which include transborder disease surveillance, quarantine measures, biomedical healthcare, environmental sanitation and town planning. What are the impact of the epidemic on Lagos society? This discusses the effect of the mortality level on societal behaviour and attendant fear of contagion. Thus, it unveils the implication of movement restrictions and quarantine ordinances on labour productivity, and trade. Furthermore, this question is answered by revealing the financial consequences of the anti-Plague campaign in Lagos. Further still, the colonial approach to Plague control projects the class struggle in society between the colonizers and the colonized. This was examined through the lenses of town planning and medical interventions. This brings to the fore, the public health politics, challenges, practices, reforms, and local responses that pervade the social pathology of Bubonic Plague in Lagos from the initial outbreak in 1924 up to 1959 when the pandemic was considered inactive by the World Health Organisation (WHO).

1.3 Objectives and Significance of the Study

The aim of this thesis is to provide documentation on the history of Bubonic Plague in colonial Lagos. This involves a comparative analysis of colonial and local perception on epidemic outbreak and control. The specific objectives of this research are to:

- i. examine the transborder origin of Bubonic Plague,
- ii. analyse its pattern of transmission and diffusion in Lagos and environs
- iii. uncover the nature of colonial intervention and local responses.
- iv. unmask its impact on Lagos society

The significance of this thesis is obvious in its contribution to the literature on medical and environmental history by providing documentation on the history of Bubonic Plague

in Lagos. It particularly opens up a new dialogue on Transborder related epidemic outbreak and control in Lagos. In an era of globalization, a reconstruction of the history of Bubonic Plague in colonial Lagos provides insight on the warning signs, techniques, and method of containment of similar epidemic outbreak based on local and foreign methods of disease control. The global trend of health care research is geared toward curative and synthetic medicine which is gradually being undermined by microbial drug resistance. Thus, those trained in the biomedical sciences are under pressure to keep up to date with new findings in their fields of specialization and they rarely have the time, inclination or skills necessary to engage in the historical aspect of their subject.⁴⁷ Thus, this thesis provides new knowledge on the social determinants of epidemics as well as local responses over time. It allows for new understandings of Bubonic Plague in the context of ecological processes driven by Eurocentric urbanization and its attendant environmental, economic and sociocultural changes. The lessons of history will be useful to policy makers, public health practitioners, scholars as well as the general public. It will create a reliable basis for public health planning, policy formulation and implementation.

1.4 Scope of the Study

The study area is the city of Lagos and its environs. This thesis covers the period of thirty five years (1924-1959). This period of study is important due to the historical change embodied in it. The period 1924 to 1931 marked a continuous outbreak of the epidemic with a recorded 1,947 cases in Lagos.⁴⁸ Based on archival records, the yearly breakdown of the cases is as follows: 1924 (414), 1925 (104), 1926 (497), 1927 (155), 1928 (519), 1929 (188), 1930 (65), and 1931 (5).⁴⁹ The population of Lagos in 1921 was 99,700 and 126,000 by 1931.⁵⁰ Thus, the mean average population of the city between

1924 and 1931 is 112, 850 people. Considering the foregoing, the attendant mean morbidity rate attributable to Plague in the period of study amounts to 1.7% of the total population yearly. This scenario satisfies the criteria of the term ‘epidemic’ as described by health authorities and epidemiologists. An epidemic is ‘the occurrence in a community or region of cases of an illness specified health behaviour, or other health-related events clearly in excess of normal expectancy’.⁵¹ This standard epidemiologist definition does not take into cognizance the minimum number of cases, spatial spread and the time span of an epidemic.⁵² Thus, the usage of the term ‘epidemic’ by health authorities implies an increased or unprecedented spread of an infectious disease in a population.⁵³ A Pandemic is ‘an epidemic occurring over a very wide area, crossing international boundaries, and usually affecting a large number of people’.⁵⁴ As noted by the *Dictionary of Epidemiology*:

A single case of a communicable disease long absent from a population or first invasion by a disease not previously recognized in that area requires immediate reporting and full field investigation; two cases of such a disease associated in time and place may be sufficient evidence to be considered an epidemic.⁵⁵

The outbreak of Plague of 1924 to 1931 was unprecedented in the history of colonial Lagos. Despite the immediate cost of the epidemic in terms of mortality rate and increased costs of healthcare, its long term effect is obvious in the area of urbanization, politics, socioeconomic and environmental change. Being a pandemic, the disease was considered active globally until 1959 by the World Health Organisation. Thus, the period 1924 to 1959 witnessed unprecedented reforms of public health, infrastructural development and urbanization thereby creating new socioeconomic and cultural landmarks in the history of Lagos.⁵⁶ While these developments unfolded amidst racial politics, it set

the pace for epidemic control measures and urban governance in Nigeria. These historical events and their implications for society are the subjects of this thesis.

1.5 Research Methodology

(a) Method of Data Collection: The background information for this thesis is derived from library sources - books, journals, periodicals, and monographs. Being a colonial study, the substantial primary data for used in this thesis were collected from the National Archives Ibadan (NAI). The records in this category include memorandum generated through confidential communications of the Central Secretary's Office (CSO) including records of the colonial medical and sanitary office, Federal Public Works Department (PWD), Medical Research Institute, Yaba, Federal Ministry of Health (M.H. FED), and Commissioner of the Colony Office Lagos (COMCOL). Furthermore, additional data was taken from the Annual Reports and the Blue Books of Statistics for colonial Lagos Nigeria. The extant documentary evidence is enhanced with oral data collected from native elders in Yaba, Obalende, Idumota, Idumagbo, Iddo, Ebute Metta, Surulere, Ikeja, and Agege in Lagos. The oral data was collected using the snowball interview approach. In adopting this method, the researcher asked primary respondents for referrals to other potential respondents. The snowball sampling approach is appropriate due to the time lapse and the dearth of contemporary general knowledge of the episodes of Bubonic Plague in Lagos. Other useful sources include biographies and colonial newspaper reports.

(b) Method of Data Analysis: This research adopts a historical method of data analysis based on descriptive and interpretative approaches. This entails the description of the history of Bubonic Plague and its aftermath. The interpretation involves deducing the historical significance of this epidemiological pattern as they influenced colonial policy

formulation and implementation as well as local responses. For instance, movement restrictions at the Denton Bridge and the general fear of contagion in 1924 had implications for internal trade and food security.⁵⁷ Also, harsh Plague control measures such as demolition of buildings and inhuman quarantine system led to an illicit business of smuggling the sick from the Lagos Island to the mainland, thereby marking a new sequence of outbreaks outside the Island by 1929.⁵⁸ Further still, Plague control in colonial Lagos was not restrictive to European intervention as ethnographic field survey provides useful narratives of local ethno-medical interventions which were weakly documented in the archives. This oral source complements archival data in the making of a balanced narrative. Thus, the descriptive analysis embeds the historical interpretation of the issues of Plague epidemic and local responses as well as the implication of this phenomenon on societal progress.

(c) Problems of Data Collection: The challenges encountered in the course of data collection include sporadic services at the National Archive Ibadan due to industrial action. Secondly, it was tasking locating the relatives of some survivors of the epidemic in Lagos due to time lapse.

1.6 Conceptual Clarifications

This section situates the present study within an established system of thought in the subfield of historical epidemiology. Being a historical inquiry, this is not an exercise of theoretical jingoism, but rather ideas that are firmly based on the interpretation of extant historical evidence. This is done to discern systematic patterns of the historical currency observed in the history of Bubonic Plague in Lagos.

Epidemics have been conceptualized along two major lines. These are the biomedical and social concepts of causation.⁵⁹ The biomedical concept focuses on the individual causes of diseases like unhealthy personal life style and genetic make of individuals that are susceptible to infectious diseases. The social concepts of causation examine the origin and control of epidemics in the context of population-wide dynamics involving cultural, political, and socioeconomic structure of society.⁶⁰ This thesis is guided by the social concepts of causation. This is the domain of population health – ‘the health outcomes of a group of individuals, including the distribution of such outcomes within the group’.⁶¹ The ‘distinction between population health and public health is that population health describes the condition, whereas public health includes the policies, programs, practices, procedures, institutions, and disciplines required to achieve the desired state of population health’.⁶² Furthermore, historical epidemiology ‘is the study of the impact of efforts to control disease over time and the ways in which interventions have transformed patterns of disease and influenced disease transmission. It integrates ecological, social, economic, and political processes with pathogenic processes, human responses, and the effects of global health interventions’.⁶³

These epidemiological and public health fields adopted are interwoven and shares the analytical traits of disease processes when viewed through the lenses of eco-social factors. These approaches have been used overtime based on concepts like the ‘disease of civilization’.⁶⁴ In this light, epidemics are often perceived as a product of inequality in society, in which the ‘privileged classes ...enjoyed a degree of freedom from some of the epidemics that continued to ravage the impoverished masses’.⁶⁵ In colonial Lagos, the Plague epidemiological pattern shows that the poorest were the most affected.⁶⁶ The incorporation of Lagos into the global economy in the early twentieth century was marked by series of infectious diseases including the Bubonic Plague. Also, Plague control

measures were driven by socioeconomic preferences that ensured the survival of the imperial capital in the city. This critical perspectiveness, puts socioeconomic factor in the central place of Plague epidemiology in West Africa.

The colonial estate in Lagos during the outbreak of Plague was an assemblage of imperial capitalist interest built on the concept of mercantilism. It is not surprising, therefore, that epidemic level challenges erupted in the colonies due to global economic and urban growth that marked the expansion of European capitalism in West Africa and Lagos in particular. While the insanitary conditions of the city had been noted since the late nineteenth century, the colonialist approach to the problem was lackadaisical. Despite the ‘unsanitary’ impression of Lagos, the colonial authorities were not ready to commit themselves to sanitary reforms which were not perceived as a legitimate target for public expenditure.⁶⁷ In this way, the improvement of the colony was tantamount to waste of imperial resources. The unprecedented outbreak of Bubonic Plague with its high morbidity and mortality level poses a challenge to the imperial ambition, natural resource exploitation and capital accumulation. This technically explains the belated rush towards sanitary measures and town planning from the 1920s to the 1950s. Also, these measures were ingrained in class disparities that found expression in the socio-spatial delineation of the society. Thus, the social concepts of causation project the social determinants of the history of Bubonic Plague in Colonial Lagos.

1.7 Literature Review

The study of epidemics has received attention from scholars writing largely from medical, historical, anthropological and biological backgrounds. However, there is the dearth of historical study of disease processes in West Africa. This is particularly true in the case of the Plague in colonial Lagos. Thus, this section reviews extant literature on

Disease Processes and epidemics generally, with a special attention on Plague in colonial Lagos. W. Rossen⁶⁸ discusses the Bubonic Plague of Justinian and its impact on society. Rosen asserts that the *Y. pestis*, the bacterium of the Bubonic Plague, probably evolved in the fertile region of the Great Lakes of East Africa. However, its distinctive effects - grapefruit-sized swellings (buboes) in the armpits and groin - were first recorded around AD541 in the city of Pelusium on the Nile delta in Egypt. According to Rosen, the bacteria whose preferred host were the rat was carried by the Mediterranean black rat and the Plague migrated westwards from Pelusium to Alexandria, from whence it was exported through ships across the trade routes of the Mediterranean to Constantinople, the capital of the eastern Roman Empire, in the spring of 542. At first, the hospitals were full, then the burial grounds. History's first pandemic killed at least 25 million people, depopulating entire cities and depressing birth rates for generations.⁶⁹

The thrust of Rosen's study is the influence of the pandemic on the transformation of the Mediterranean world of late antiquity into medieval Europe. Rosen shows how the Bubonic Plague weakened the Roman Empire's resistance to the conquering Muslim armies. In the final analysis, the Empire was brought down from within by unseen tiny creatures rather than from giant soldiers from without. Central to Rosen's analysis is the socio-cultural dimension of Plague control as many turned in desperation to magic amulets and saints' relics which ensured maximal victory for the *Y. pestis* bacteria. This Eurocentric conception of disease processes that demonises traditional medicine abounds in the colonial literature and biomedical sciences. Indeed, this stereotype of local ethno-medical intervention in Plague control ran afoul of the realities on the ground in colonial Lagos. Despite its focus on case studies in Europe, it nonetheless provides a background for the study of Plague in Lagos.

J. Kelly⁷⁰ analyses the pattern of the Bubonic Plague of the Middle-Ages called the “Black Death”, regarded as the worst human disaster in history. Kelly traced the source of this epidemic to the China Sea where it spread to the fishing villages of coastal Portugal and from there to other parts of Europe including England, causing casualties of a great magnitude, reducing the population of Europe by a third. Kelly uncovers the spread of the disease from one nation to the other stimulating a new social hierarchy in favour of the women folks and the proletariat but also triggered anti-Semitism.⁷¹ Using vast primary sources, Kelly examines the impact of the Plague within the context of societal and demographic change that so shaped the Renaissance and Reformation. Most notably, he explores how the Plague rescued Europe out of a population and resource dilemma and drove innovation and the rise of European global dominance. Similarly, the Bubonic Plague of Colonial Lagos stimulated urban renewal and planning with serious consequences for Lagosians. Despite its Eurocentric purview, it creates a historical background for the study of Bubonic Plague in Lagos.

C.M. Porter⁷² examines the impact of the Second Plague Pandemic on the Jewish society in Europe. As noted by Porter, the outbreak of Bubonic Plague in 1348 was one of the lowest points in medieval history. The Plague brought many changes to the landscape of Europe as most of the population was stricken by it and succumbed to it. The economy was affected due to the available workforce being reduced. Porter uncovered the Jewish persecution during the outbreak as the later were blamed for the epidemic in some part of Europe. As C.M. Porter puts it:

Unfortunately, like most of their existence, the Jewish people of Europe were blamed and suffered for a conspiracy that was a fallacy; these poor tortured souls would confess to just stop the pain and hopefully end their suffering and that of their people.⁷³

While the Plague affected every strata of the European society - young, old, male or female, rich or poor, many Jews were forced to confess to the crime of Plague outbreak. Consequently, these confessions sealed their fate as the cause of the Plague for many Christians and they endured the injustice. Porter's study shows the impact of epidemic diseases such as Plague on society especially in the area of ethnicity and cultural intolerance. However, Porter's work is lacking in African realities. It did not discuss the historical epidemiology of Plague and its impact in colonial Lagos.

A.E. Pamuk⁷⁴ analyses social mobility in Europe during and after the Black Death. Pamuk made use of the recently compiled evidence on real wages and on urbanization rates for different parts of Europe and the eastern Mediterranean to gain further insights into this earlier period. As observed by Pamuk, 'the Black Death was a powerful exogenous shock which led to a sharp increase in wages across Europe and the eastern Mediterranean'.⁷⁵ The repeated outbreaks of the Plague prevented a quick recovery of the population. As a result, high wages remained an important part of the economic environment in Europe for a very long time. This exogenous shock triggered a series of institutional changes with far-reaching consequences. According to Pamuk, the demographic regime of the Middle Ages was irreversibly altered during this period. The Black Death also led to far-reaching institutional and other changes in the countryside where the great majority of the population lived. These changes paved the way for the growing commercialisation of agriculture. Also, it stimulated long-term developments in the urban areas, in manufacturing and trade. Interest rates declined coupled with greater mobility, flexibility and institutional change to the guilds, and contributed to the rise of rural industries. Scarcity and the high cost of labour also stimulated an era of labour-

saving technological innovations. Correspondingly, the Bubonic Plague triggered socioeconomic changes in colonial Lagos.

M. Echenberg⁷⁶ analyses the global urban impact of Bubonic Plague from 1894 to 1901. Echenberg examines the dynamics of the Third Plague Pandemic that was responsible for the death of more than 15 million lives. Echenberg engaged in a critical analysis of ten cities on five continents that were ravaged by the pandemic in its initial years, that is, Hong Kong and Bombay, the Asian emporiums of the British Empire, where the epidemic first surfaced; Sydney, Honolulu and San Francisco, three ‘pearls’ of the Pacific; Buenos Aires and Rio de Janeiro in South America; Alexandria and Cape Town in Africa; and Oporto in Europe. At the core of Echenberg’s argument is the Plague’s impact in each of these cities, with particular reference to the politicians, the medical and public health authorities, as well as commoners many of whom were economic migrants choked in over-crowded apartments.⁷⁷ Echenberg analyses the challenge of the deadly epidemic disease across racial and ethnic divides, and uncovers the politics, migratory, and public health problems that ensured the festering of the epidemic across state boundaries.⁷⁸ Although Echenberg’s study is based outside the context of our study area, it however uncovers the trend of public health inequalities in world history and provides a historical framework for further studies on Bubonic Plague.

M. Echenberg’s book *Black Death, White Medicine: Bubonic Plague and Politics of Public Health in Colonial Senegal*⁷⁹ analyses the pattern of Bubonic Plague in colonial Senegal. Echenberg uncovers the dynamics of the Pandemic of 1914 and 1944 with particular focus on Plague ecology in the interwar period and the experience of the *Sereer Ndut* ethnic group, who were mostly affected by the epidemic. The thrust of Echenberg’s study is the analyses of the socio-cultural approach of the locals to the epidemic and their

contributions to its resiliency and eradication overtime. Echenberg noted that in 1914, Africans resisted public health policies in the streets of Senegal and the French containment strategies failed. However, by 1944 the outbreak was successfully controlled owing to the applications of the new insecticide DDT, usage of antibiotics, and the cooperation of locals. Echenberg asserts that Bubonic Plague was a disease associated with transborder migration and commerce. It suggests that the Plague bacillus, *Yersinia Petis*, was propagated by foreign ships and became endemic due to favourable environmental as well as socio-cultural factors.⁸⁰ While Echenberg's study is a significant contribution to the history of Bubonic Plague in West Africa, it is inherently restricted to some districts of Senegal such as Dakar and Saint Louis, hence, its contributions to the history of Plague in Lagos is limited.

L. Bigon's article 'A History of Urban Planning and Infectious Diseases: Colonial Senegal in the Early Twentieth Century'⁸¹ examines the spatial implications of the French sanitary policies in early colonial Senegal. Bigon work focuses on the French politics of residential segregation following the outbreak of the Bubonic Plague in Dakar in 1914, and their precedents in Saint Louis. These policies can be conceived as most dramatic, resulting in a displacement of a considerable portion of the indigenous impoverished population. Bigon analyses this aspects of residential segregation through the perspective of cultural history and history of colonial planning and architecture. Using the historical methodology, Bigon exposes the contradictions that were inherent in the French colonial regime in West Africa. According to Bigon, these contradictions were wisely used by the African agency, so that such a seemingly urgent segregationist project was actually never accomplished. The politics and policies of 'assainissement' in the colonial urban context were not merely a welfare project, motivated by purely public hygiene objectives but essentially characterized by policies of urban inequality. However, policies of residential

segregation in the French colonies in Africa differs due to the fact that their racial reasoning was never obvious and never resembles the British oriented Lord Lugard's Township Ordinance of 1917, enforcing a colour bar in the colonial urban sphere of British Nigeria such as in Lagos. The French colonial authority implemented urban policies which were not racial segregation between two kinds of people.⁸² Notwithstanding, segregation on medical or pseudo-sanitary grounds was a calculated step towards urban disparity in both Dakar and Lagos.

P.D. Curtin⁸³ in his book, *Disease and Empire: The Health of European Troops in the Conquest of Africa*, attempts an historical reconstruction of the place of disease processes in the European conquest of Africa. Based on the medical archive of the British and French military forces, Curtin argues against the widely accepted theory that the improvement of tropical medicine such as quinine was decisive in the European conquest of Africa. According to Curtin, this played very insignificant role in the European domination of Africa in the nineteenth century. This assertion is supported by the massive casualty suffered by the troops due to yellow fever, typhoid and malaria which seems resistant to quinine dosages and other health measures at this time. According to Curtin:

Over that period, the annual military disease mortality per thousand was reported 220 in Saint Louis and 179 in Goree. In 1819 to 1831, after the French took over the two Islands, the disease death rate was 191 per thousand...in 1830 during the Yellow-Fever epidemic the death rate was 573 per thousand, falling to 146 per thousand in 1832-87.⁸⁴

Curtin's work shows that the scientification of tropical medicine was only felt during the era of consolidation at the aftermath of the conquest. Despite the novelty of Curtin's historiography of disease and colonial conquest in Africa, it did not take into cognizance,

the public health implications of European conquest of Africa especially in the area of the introduction of new type of diseases into the African environment and the attendant impact on the local population.

D.E. Bloom and D. Canning⁸⁵ discuss the links between income and infectious disease epidemics within the context of globalization. Bloom and Canning shows that material prosperity and better living conditions protects individuals against illness in general and epidemics in particular. This argument is established on the basis that healthy people get more education, are more productive in the work force, attract foreign investment, and save more. As better health leads to decreases in family size, the consequent change in a country's age structure can boost economic growth. Epidemics can obstruct these effects by changing expectations about how well an economy will function and by deterring investment and tourism. In this perspective, epidemics hamper economic development and trigger vicious spirals whereby worsening health, reduces wealth and diminishes the protection against further health threats. Further, Bloom and Canning shows that while the immediate costs of an epidemic are apparent, the long-term costs are crippling. The long-term vulnerability to epidemics may decrease as development standards rise, but a globalizing world creates chain of infectious disease epidemics. Thus, spending on anti-epidemic and basic health infrastructure must be seen as an investment, with part of the return being the reduction in the future costs of epidemics. Bloom and Canning observes that policymakers are often influenced by short-term political considerations, causing them to pay too little heed to important longer-term realities. Moreover, International cooperation is also vital for preventing and containing epidemics. Epidemics can have economic impact far beyond the borders of their source countries – and these potential economic effects are often amplified by those aspects of the modern world that facilitate disease spread, affect tourism and trade, disseminate awareness and

fear, and exacerbate counter-productive forms of protective behaviour and isolationism. Bloom and Canning's study provides a background for the study of Bubonic Plague in Lagos, especially in the area of the relations between globalization, colonial inequality and epidemics.

L. Saker, et.al examines the health impact of transborder flows around the world.⁸⁶ As observed by Saker, 'there is substantial evidence to suggest that, so far, globalization has posed more negative than positive impact on health, including risks from infectious diseases'.⁸⁷ Saker shows that trade in specific products have a more direct impact on the spread of infectious diseases. For instance, huge increases in international trade have transformed the production and distribution of food products. Cheaper transport system of global reach now allow companies to manufacture many food products in less expensive labour markets, using ingredients from different parts of the world and then distribute them worldwide across state boundaries. In essence, mass production handling procedures, environmental factors, new and emerging pathogen and poor regulation are contributing to a marked increase in worldwide distribution of food borne infectious diseases. Also, Saker and others noted that the trade in vehicle spare parts such as used tires has been associated with the spread of dengue fever around the world. While Saker opens up a dialogue on the impact of economic globalization on the dispersal of infectious diseases, its analysis is based on examples derived from Europe, Asia, and the Americas. Nonetheless, it uncovers the vitality of the health implications of transborder flow of goods as demonstrated by the outbreak of Bubonic Plague in colonial Lagos through the agency of maritime international trade.

A. Asiwaju⁸⁸ asserts that European imperialism in Africa during the nineteenth century witnessed the partition of the continent without regard for the pre-existing culture

areas. Asiwaju acknowledges the presence of various migrations and related transborder networks of individuals and groups in Africa. It argues that transnational social spaces in the continent consist of combinations of social and symbolic ties that can be found in multiple states. This tie represents a social capital that allows actors to cooperate in networks and organisations, serving as a mechanism to integrate groups and symbolic communities. According to Asiwaju, this scenario undermines state-centric border control in Africa.⁸⁹ While Asiwaju's work covered the political, economic and cultural implications of the colonially determined borders in West Africa, it failed to articulate the impact of the phenomenon on the public health system in the region.

J.M. Barry⁹⁰ traces the pattern of the deadly influenza pandemic of 1918 which was responsible for the death of about 100 million people globally. Barry attempts a narrative of the episodes shaped by the pandemic from its origin in the 'Spanish influenza' and the spread of the virus eastward with the troops as they made their way toward Europe and the killing fields of the Western Front. Barry asserts that the World War I might have created the pandemic due to overcrowded military camps and troop ships.⁹¹ Hence, the overcrowding and the mobility of the troops, along with the virulence of the flu strain surfacing in the spring of 1918, created a killer strain. Barry traced the first cases of flu in Europe to Brest, France, shortly after American troops disembarked there in April, 1918. The flu infected vast number of the Allied and Axis armies. The thrust of Barry's study is the politics of flu control. As observed by Barry, the flu surfaced in Spain but because Spain was a neutral nation, its press was not censored, as were American and European newspapers. Consequently, only Spanish newspapers reported the flu, and the pandemic became known as the 'Spanish influenza'.⁹² The widespread but essentially non-lethal strain of flu mutated into a deadly killer by autumn of 1918 due to passivity of the warring countries in the face of the epidemic. Whereas the focus was on World War I, political

elites and policy makers were unwilling to address the rapidly growing transborder epidemic. The censorship of the press and the containment of information about the disease ensured its development into a deadly pandemic.⁹³ Similarly, the control of deadly influenza epidemics of 1918 and 1919 in colonial Lagos witnessed the politics of public based on racism and social inequalities in the city. The limitation of Barry's study is its restriction to Pandemic Influenza - an outbreak experienced in Lagos prior to the Plague crisis. Nevertheless, it creates a background for the study of subsequent pandemics such as the Bubonic Plague in Lagos.

F.M. Washburn⁹⁴ analyses transborder epidemic control using data management of health systems in the three major countries (Guinea, Sierra Leone and Liberia) in West Africa affected by the *Ebola* epidemics of 2014. As observed by Washburn, Data management of health systems could be very complex and becomes even more challenging at multiple points of entry, where there are many interwoven parts working together in order to get a potential traveller from his/her first steps into an airport area to boarding a plane, all while ensuring that the traveller has been thoroughly screened for any signs or symptoms of a possible *Ebola* virus disease infection. This capstone describes the history of the International Health Regulations' effects on control of disease spread and importation at points of entry. This data system is vital to the prevention of the exportation of *Ebola* virus disease in order to keep each country's airspace open and allow goods, personnel and services to continue to be imported into these countries during the sustained *Ebola* outbreak. Washburn shows that the concerned countries lacked the infrastructure for transborder disease surveillance: 'lack of manpower to enter data for every traveller who was screened... lack of diversity in the data... no foreseeable way to link the exit screening database with community-level database'.⁹⁵ Whereas Washburn's work did not

discuss the socioeconomic impact of Ebola in West Africa, the harmonization of database of health systems in colonial Lagos presents a similar challenge.

I. Nuttall⁹⁶ focuses on the control of *Ebola* across state borders in West Africa. As noted by Nuttall, in the face of the *Ebola* epidemic, implementing travel bans seems attractive but cutting off pressurized West African nations would be catastrophic to families and economies.⁹⁷ People in countries, far from the troubled region may be cajoled into a false sense of security, believing *Ebola* can never reach them if flights are halted. However, in practice, no state boundary is impermeable – transborder migration occurs on daily basis, not only by airplane but traversing porous land borders or on ships trading goods up and down maritime borders. Finally, Nuttall concludes that the key to stopping the international spread of epidemic disease is global vigilance based on effective transborder surveillance and control system. Amongst others, the present study examines the history of transborder epidemic control in West Africa with a focus on the Bubonic Plague in colonial Lagos. Hence, it is a timely answer to Nuttall’s call for further research in this regard.

J.M. Cohen, M.L. Wilson, and A.E. Aiello⁹⁸ attempt an analysis of the social factor in the outbreak and control of epidemics. As observed by Cohen and others, despite the proven successes of biomedical research in discovering cures and treatments of infectious diseases, pathogens continue to emerge or re-emerge. Hence, the recognition of the role of social determinants in transmission and risk of epidemics is one component of public health’s stated goal of population level disease prevention encompassing the ‘why’ as well as the ‘how’ of disease causation.⁹⁹ Cohen and others reveals that focusing solely on curative medicine may have led to exclusion of rigorous consideration of the more distal determinants that influence future transmission and evolution of both existing and new

pathogenic threats to health. Cohen and others indicates that the role of social factors in influencing the etiology of infectious diseases is under-studied and calls for a focus on the social determinants of an outbreak at the onset of epidemics rather than microbial cures and medical treatment. The present study builds on this framework by examining the social determinants of Bubonic Plague in colonial Lagos.

M. Vaughan¹⁰⁰ examines the concept of ‘illness’ in colonial Africa as a cultural system that constructed the locals in the often Eurocentric views of the colonizer. Vaughan emphasizes that the European attitudes toward medicine in Africa based on individual responsibility for sin and disease, and secular medicine, which tended toward an ethnic model of collective pathology, leprosy, and insanity in a context of African ignorance and the Western determination to crush indigenous beliefs that are regarded as unrewarding gyration.¹⁰¹ The underlying Eurocentric assumption of this discourse was that disease was produced by an impoverished African system of thought and psyche. In essence, Vaughan argues that Africans were made sick not by the material changes to their lives and environment, but by their poor adaptation to modern life. Contrarily, imperialism in colonial Lagos was obvious in the implementation of racist public health policies that sought to segregate the society into the colonialists and the ‘others’ enclaves. Despite the contribution of Vaughan’s study to our understanding of racist public health policies in Africa, it did not discuss disease processes in the context of the Bubonic Plague in colonial Lagos.

C.E.A.Winslow¹⁰² adopts a sociocultural approach to the history of epidemics. As observed by Winslow, people’s ignorance led to magical or religious explanations of disease – sent by the gods as punishment for sins. In this regard, highly developed priesthood practices of ancient cultures believed infectious diseases manifested through

religion and spiritualism.¹⁰³ Winslow illustrates this point of view through copious examples of ancient societies such as in Persia and Rome where emphasis was laid on diseases and spirits. It argues that disease was caused by evil spirits and must be controlled by exorcism. While this may be true in Persia and Rome, ethno-medicine played a vital informal role in disease management and public health in colonial Lagos. This pattern of local ethno-medical intervention in colonial Lagos differs from Winslow's Eurocentric perspective.

P.D. Curtin's work 'Medical Knowledge and Urban Planning in Tropical Africa' analyses the relationship between biomedicine, racism, and urbanisation in colonial Africa.¹⁰⁴ Curtin illustrates how Europeans applied their medical knowledge as a coping strategy in a seemingly hostile African disease environment. According to Curtin the turn of the nineteenth century was an era of medical topography – where disease was perceived to have thrived in low altitudes and warmer weather. This European view of disease in tropical Africa impacted on the built environment characterised by the preference of siting European quarters in areas of higher altitude and high ventilation.¹⁰⁵ The thrust of Curtin's study is the analysis of how urban segregation of native Africans was instituted by scientific theory that ascribed the Africans as major carrier of germs and infections and their settlement as reservoirs of infectious diseases. According to Curtin:

A conference of principal medical officers for all the British West African colonies met in 1909 and again in 1912. It supported segregation and in 1912, drew up a plan to complete the segregation of the European population in all African towns within ten years.¹⁰⁶

Curtin observed that these racial principles were implemented in British Nigeria through the Township Ordinance of 1917 enacted by Lugard (the Governor General) who moved for a more intense segregation policy that guaranteed the imprisonment of any European who lived in an African zone.¹⁰⁷ It was noted that many segregation plans between 1914

and 1919 targeted the removal of African merchants from commercial zones basically to secure economic advantages for European settlers.¹⁰⁸ Hence, Curtin's work unveils how public health policies in colonial Africa were influenced and driven by racial stereotypes and imperialism. While P.D. Curtin did not focus on Lagos, he enriches our understanding in the area of political economy of public health and biomedicine in colonial Africa.

S.O. Aghalino and L.E. Odeh¹⁰⁹ analyse the sociocultural impact of oil exploration on the Niger Delta region of Nigeria. Specifically, Aghalino and Odeh examines the social consequence of the oil industry in the form of high wave of inflation, moral bankruptcy, land grabbing, and environmental degradation and the armed rebellion occasioned by interrelated factors. Aghalino and Odeh unveils the growth of Venereal diseases such as the HIV pandemic in the region due to the 'scandalous and promiscuous social concubinage between oil company workers and girls in the host communities'.¹¹⁰ This is not unconnected to widespread poverty perpetuated by gas flaring and environmental degradation that has forced the teaming uneducated and unemployed female population in the region into prostitution. While Aghalino and Odeh did not discuss cases of epidemics resulting from oil flaring in the Niger-Delta region of Nigeria, it has contributed to the present discourse by showing the correlation between imperialism, environmental change, social inequality and the spread of pandemic disease such as HIV/AIDS in Nigeria.

S.O Aghalino's *Oil and Gas Exploration and Production in the Isoko-Urhobo Areas of Delta State Nigeria, 1958-1995*¹¹¹ examines the evolvement of oil exploration on the Isoko-Urhobo people of Delta State, Nigeria. Aghalino argues that despite the initial euphoria of oil discovery and possible benefits thereof, the Isoko-Urhobo people soon realized that the development was rather a curse on the land. This position is reached based on the critical analysis of the socioeconomic, political and environmental consequences of fossil-fuel exploration on environmental health. Of vital importance to

the present study is the chapter that discussed the impact of oil and gas exploitation on the ecology of Isoko-Urhobo land. As Aghalino puts it:

Exploration and Exploitation activities in the oil industry in Isoko-Urhobo as elsewhere in the Niger Delta have permanently alienated large tracts of land and in this wise accentuated land scarcity. Virtually, the entire land and offshores of Delta State where the Isoko and Urhobo belonged are covered by Oil Mining Leases (OMLs) or Oil Prospect Leases (OPLs), which entitled the oil companies to encroach on peasant land and fishing ponds...the acquisition of so much hectares of land by the oil companies ...naturally deprive the people of the much needed land for agricultural purposes.¹¹²

Aghalino's submission showcases how oil exploration has led to larger poverty in Isoko-Urhobo land. A striking perspective in this regard, is the danger posed by oil rigs to the natural vegetation and by extension medicinal plants. This phenomenon created a fertile ground for pathogenic infections in the face of dwindling botanical resources for ethnomedicine. In the same light, European urbanism and its attendant land-misuse impacted public health in colonial Lagos.

L. Bigon¹¹³ attempts a comparative study of the Third Pandemic Plague in Dakar, Senegal (1914), Lagos, Nigeria (1924), and Kumasi, Ghana (1924). Bigon particularly engages a comparative historical discourse of the system of Plague control in the Francophone and Anglophone West Africa with the thematic foci on colonial urban planning policies. The thrust of Bigon's study is the reflection on anti-Plague measures as it manifested in social inequality, a legacy that has transcended into the postcolonial era. Bigon shows that recent criticism of the western intervention in the West African Ebola outbreak showcases the perpetuation of the hierarchical global North-South relations, which itself is historically traceable to colonial Plague control in the region. In this light, the dichotomized order of managing epidemics which includes the closure of internal and external borders, restrictive migratory measures geared towards safeguarding public health

in the Western world at the detriment of local communities are the inheritance of colonial era. While Bigon provides a fair background for the present study in the area of the nexus between Plague control and urban planning, it did not discuss the transborder epidemiology of Plague as well as local interventions. Furthermore, Bigon's geographical approach is lacking in socioeconomic and cultural dynamics.

K. Ngalamulume's article 'Plague and Violence in Saint-Louis-du-Sénégal, 1917-1920'¹¹⁴, examined the Plague epidemic that struck Saint-Louis in 1917 as a significant episode in the spread of the disease in Senegal between 1914 and 1945. Ngalamulume particularly analyses the dynamic of local responses to the epidemic outbreak. The thrust of this article is its focus on Plague control in Saint-Louis, the first Capital of French West Africa which had been largely neglected in earlier studies. Ngalamulume explores the impact of the Plague epidemic on urban policy and race relations as well as the specific ways that these issues were defined and resolved in Saint-Louis. Ngalamulume argues that local Islamic practises were violated by the colonial sanitary and biomedical approach to Plague control in Saint Louis. Consequently, local reaction to these measures was violent. This situation prompted the colonial government to reconsider its policy of accommodating native cultural preferences seen as a political diplomacy in disease control. Hence, by August 1918 amidst local violent reactions against Plague measures involving assault of colonial public health workers, the administrators of the colony inaugurated what they called the "medico-military phase" of the Plague policy by declaring the state of emergency on Guet-Ndar, Ndar-Toute and on the isolation station of Pointe-aux-Chameaux.¹¹⁵ Subsequently, the implementation of the Plague operation was carried out using military force. This scenario involved the evacuation of people to the quarantine stations, systematic disinfection of few houses that were built in durable materials, and the burning down of the majority of suspected huts. This scenario led to

armed conflict between the colonialist and the natives - Men, women and children were all armed with sticks, clubs, iron bars, harpoons, knives, axes, and swivels. Within three days, given the imposing military force deployed, the resilient residents of Guet-Ndar in Saint Louis gave up all opposition and embraced dialogue.¹¹⁶ Among others, Ngalamulume's survey provides a background for the understanding of violent local responses to the Third Plague Pandemic in Francophone West Africa.

J.I. Roberts' 'Plague Conditions in a Rural Endemic Area of Kenya: Keruguya District, Kikuyu Province'¹¹⁷, examined the causes of endemic-Plague among the Kikuyu people of rural Kenya in the 1930s. Roberts noted a sequence of environmental change occasioned by agricultural practices such as shifting cultivation with its consequent deforestation. In this respect, it was discovered that among the Kikuyu people, highyield crop production that centred on grains like maize and *mwele* coincided with Plague outbreaks.¹¹⁸ This situation was complicated by poor housing based on mainly hut-dwellings without toilet facilities which harboured 'large numbers of rats'.¹¹⁹ In essence, Roberts argues that human interaction with the natural environment brought human population in contact with wild rodents – an encounter that facilitated the transmission of zoonotic Plague disease to the former. While Roberts provides a background on Plague etiology in a rural Kenya, the non-agrarian nature of colonial Lagos presents a different terrain for the historical analysis of Plague in Sub-saharan Africa.

M.O. Muritala¹²⁰ examined urban livelihood in colonial Lagos. Murtala analyses the coping strategies adopted by the native residents in the face of urban challenges occasioned by poverty and economic changes of the period. This is particularly the case of informal strategies adopted by the colonized which included economic adjustment strategies (1861-1911), slum creation strategy (1920-1955) and the mobilization of social

capital (1945-1960). Murtala suggests that the colonial economic structure promoted wage labour between 1911 and 1960. The consequent influx of economic migrants in a colonial society bedevilled by spatial segregation led to the evolution of slum communities in Lagos.¹²¹ Murtala posits that ‘larger proportions of the island were swampy or waterlogged. But owing to the enormous pressure on land, many people resorted to erecting buildings [in areas], which were ordinarily uninhabitable...Because of the poor habitation in such places, epidemics were imminent and it eventually happened with the outbreak of tuberculosis and the Bubonic Plague in 1919 and 1924, respectively’.¹²² However, despite the contribution of Murtala to our understanding of environmental determinants of the Plague in Lagos, his approach is lacking in the transnational dynamics of the epidemic as well as the details of how this environmental factors impact public health in the port city.

J.A. Oluyitan¹²³ discussed the evolution of modern health services in Ibadan. Oluyitan observed that the colonial health services in Ibadan evolved in consequence of European health needs. These services were later extended to the local people due to the indispensability of indigenous labour to the running of the colonial state. According to Oluyitan, ‘the people of Ibadan, like other Africans, addressed diverse health challenges through medicinal materials such as herbs, plants, roots and flowers. Their traditional healers were also familiar with the use of supernatural means to confront exceptional health problems and socio-economic misfortunes...the opening of the Native Hospital at Dugbe and Oranyan Dispensary in 1900 and 1901 as well as the inception of Adeoyo Hospital in 1927 did not have much impact on the people’s medical culture’.¹²⁴ Thus, despite the extension of modern health services to the natives in the early 1900s, a majority of the natives shunned medical amenities because of their negative perception of colonial medicine. However, hospital patronage for the treatment of infectious diseases witnessed an increase from 1928. Oluyitan’s thesis provides useful background for a our

understanding of colonial motives in introducing modern medicine to the natives of Nigeria and local responses thereof.

N.H. Adam's work entitled 'The Changing Roles of Women in Ilorin Emirate Economy, 1823-2000'¹²⁵, examined the performance of Ilorin women in the Emirate's economy from the pre-colonial to the colonial and post-colonial era. Adam argues that Ilorin women has penetrated virtually all aspects of human endeavours and made laudable contribution society. This rare fit is achieved in the face of men's dominance in an Islamic society. Of particular interest to the present study of Plague in Lagos is the section on traditional medicine.¹²⁶ Adam shows how economic pressure had created opportunities for the women folk in the practice of traditional medicine in Ilorin Emirate. This phenomenon, she argues is due to the affordability and accessibility of such informal services in Ilorin. Adam highlights the emerging challenges in ethno-medicine which include the proliferation of fake medicine men. Similarly, traditional medicine was at the forefront of the fight against Plague in colonial Lagos. Indeed, Adam's work is additional evidence on the resilience of traditional medicine in Nigeria.

J.M. Oluwasegun¹²⁷ examines the control of the 1918–1919 influenza pandemic in Lagos. Oluwasegun unveils the reactions of the local population to new sanitary and medical policies enforced during the period, and its social and political implications for future epidemic management in the colony. According to Oluwasegun, the quest for improved sanitary conditions in the colonies received unprecedented enthusiasm from the colonial government as a result of its inevitability in the face of epidemic. Oluwasegun argues that the large casualties recorded among the African people during the influenza epidemic were due in part, to official neglect and European imperialism. 'Africans were considered as free labour to be exploited and segregated in a labour pool rather than a co-inhabitant of a living space that deserves similar sanitary facilities to the European society.

The political economy of the imperial government influenced policies and politics related to public health in the colonies. Outbreaks of epidemic provided the needed pretext for the implementation of these goals'.¹²⁸ While Oluwasegun's survey provides a background for the study of Bubonic Plague in colonial Lagos, it did not articulate its nexus with the later.

L. Bigon¹²⁹ examines the sanitary and urban planning policies of the British in colonial Lagos. Bigon shows that colonial Lagos was far from being an incarnation of a system of disciplinary power in terms of urban form. At this time there was rather a consolidation of the colonial rule, leaving considerable freedom of expression to the local population in the making of the town. This contrast is examined in several ways, including a discussion of the relation between geo-climatic conditions and colonial and indigenous sanitary policies; how the socio-physical organisation of the town affected modes of planning; and how changes in the official status of the settlement were reflected in its physical form at the turn of the century. L. Bigon analyses how problems of urban planning were actually treated by the early colonial state and examines the general background political atmosphere. Bigon shows that the colonial authorities oscillated between two poles concerning colonial urban space - they were dissatisfied with the overall 'unsanitary' impression of the city of Lagos however, in contrast they were not ready really to commit themselves to this purpose, as sanitary reforms were not perceived as a legitimate target for public expenditure thereby making poor sanitation a continuum in the history of the city.¹³⁰ In the same fashion, poor sanitation was regarded as a major problem that undermined early efforts to control the Bubonic Plague in colonial Lagos.

A. Olukoju¹³¹ attempts a reconstruction of the maritime history of the port city of Lagos. The strength of this contribution lies in the predominantly archival research into the colonial maritime policy and its impact on the economic history of colonial Lagos. Olukoju emphasizes the unsanitary housing conditions in colonial Lagos and compares the

similarity in the magnitude of maritime trade in Lagos, Nigeria and Liverpool in the United Kingdom.¹³² Olukoju uncovers commodity traffic between Lagos and the outside world and attributes the failure of indigenous firms to the comparative advantage derived by expatriate competitive businesses from the colonial government. Olukoju noted that the Plague took a heavy toll on life and trade in Lagos but led to the urban renewal of the port city.¹³³ Despite uncovering the impact of maritime trade on the colonial economy of Lagos, Olukoju did not document the diverse implications of Plague for the colonial economy at local and transnational levels.

E.O. Adeoti and U.A. Imouh¹³⁴ attempt an appraisal of Plague control in Colonial Lagos. The paper argues that the ‘indifference of the residents of Lagos to the anti-Plague campaigns of the colonial government affected attempts to stop its spread’ in the city. Consequently, it asserts that ‘fear, anxiety, suspicion, illiteracy and ignorance accounted for the delay experienced in eradicating the epidemic’ thereby blaming the native population for the outbreak.¹³⁵ There is nothing substantive in E.O Adeoti and U.A Imouh’s study of the Plague in Lagos that would suggest that this was the case. Moreover, the authors’ primary sources are chronically inadequate and limited to 1925. The paper’s over-reliance on very few Eurocentric colonial sources negates its possible critical contribution to a study of disease process in Lagos. Thus, lacking meaningful discussion of the socioeconomic, cultural, political and environmental dynamics of Plague intervention which constitutes the core of historical epidemiology, the overall discussion is simplistic.

Despite its concealment, sexuality discourse is at the core of colonial historiography in Nigeria. S.A. Aderinto¹³⁶ examines the politics of illicit sexuality and its attendant epidemic of venereal diseases outbreak and control mechanisms in colonial Lagos. As

observed by Aderinto, sexuality more than any other theme of historical enquiry 'is reflected in virtually all spheres of social and political engagement and found expression in racial inferiority, difference and pathology—the cardinal ideas and philosophy of domination—and in cultural nationalism and African resistance to alien rule'.¹³⁷ The strength of Aderinto's study is the comparative analysis of nationalism and local response to colonial laws targeted at regulating African sexuality. Aderinto shows that colonial laws targeted at select 'delinquent' Lagosians had far reaching consequences on pattern of relations among influential members of the colonial society. Further, in the face of venereal disease epidemic, the state attempts to regulate illicit sexual behaviour failed due to both internal and external antagonism, weak policy formulation and implementation.¹³⁸ As noted by Aderinto, 'The concomitant effect of this was that while the reformists were busy fighting one another over laws and their implementation, prostitutes, their male customers and others like owners of restaurants and bars continued to derive means of livelihood, enjoyment, freedom and social relevance from casual sex work'.¹³⁹ However, Aderinto has provided very little evidence of the nexus between the regulation of illicit sexual behaviour and the control of venereal disease epidemics in colonial Lagos. Moreover, it did not discuss the incidence of Bubonic Plague in Lagos.

A. Olukoju's work 'Population Pressure, Housing and Sanitation in West Africa's Premier Port-City: Lagos, 1900-1939', examines the relationship between population growth and urban infrastructure in colonial Lagos.¹⁴⁰ Olukoju discusses demographic growth in Lagos, especially in the first quarter of the twentieth century, and its consequent over-crowding in migrant quarters. As observed by Olukoju, 'Owing to the enormous pressure on land, many people resorted to erecting buildings, even in such areas as Elegbata, Alakoro, Anikantamo, Oko Awo and Sangrouse which were ordinarily uninhabitable'.¹⁴¹ The thrust of Olukoju's study is the examination of the pattern of urban-

environmental health in colonial Lagos. While the outbreak of several diseases such as Bubonic Plague and tuberculosis in insanitary spaces was traced to poor hygiene and sanitation, Olukoju did not document the transborder origin of the outbreak as well as its socioeconomic, political, environmental, and cultural impact in colonial Lagos.

The reviews unveil the pattern of disease processes and epidemiology around the world. While the discourse on the Bubonic Plague in Lagos was attempted, the geographical approach is adopted with a special focus on town planning. This has been the focus of studies conducted by L. Bigon, and A. Olukoju as well as E.O. Adeoti and U.A. Imuoh on the nexus between Plague and town planning in colonial Lagos.¹⁴² Consequently, the extant literature is lacking in socioeconomic, and cultural historical insights on Plague in colonial Lagos. Specifically, there is a dearth of studies on the transborder origin, spread and impact of Plague in Lagos. Thus, the present study attempts a holistic critical examination of the phenomenon.

1.8 Structure of the Thesis

Chapter One: Introduction

This provides an introductory note, statement of research problem, scope, objectives and significance of the study. It gives a detailed methodological approach employed and the in-depth analysis of the literature and concepts that guides the reconstruction of the history of Plague in Lagos. This section provides a general background and historical overview of the trend of Plague pandemics in human history against the backdrop of the common and distinctive historical experiences of Plague in colonial Lagos.

Chapter Two: Public Health and Disease Processes in Lagos Before 1924

The chapter offers an understanding of the prevailing pattern of disease processes and public health scenario in pre-colonial Lagos. Furthermore, it uncovers the role of colonial agency in forging a new disease environment. This is discussed in the context of the implantation of European urbanism that came with colonial rule. The factors considered in this respect include the reconfiguration of the socio-spatial landscape through new forms of transportation networks and societal living that marks a departure from the pre-colonial era. This modern communication structure had helped facilitate pathogenic transmission across borders in West Africa. The epidemic transition from endemic malaria, typhoid and smallpox to epidemic influenza, venereal diseases that preceded Plague in colonial Lagos were examined as striking examples in this regard.

Chapter Three: Origin and Diffusion of Plague in Colonial Lagos and Environs, 1924-1931

It addresses the issue of Plague origin in Lagos as well as its transmission across borders from the Gold Coast (now Ghana) to Lagos in 1924 through the maritime trade in Kolanut. This is essentially an applied theme that demonstrates how improved transportation technology that borders on seaways, road, and railway had helped in the propagation of epidemic Plague across West Africa and within Lagos and environs. In addition, the chapter unveils the role played by animal reservoirs in this regard. This section analyses the peculiarity of Plague taxonomy, symptoms, and morbidity in Lagos from 1924 to 1931 thereby uncovering its social pathology and historical causation.

Chapter Four: Colonial Interventions and Local Responses, 1924-1959

The chapter uncovers colonial stereotype of the epidemic and the consequent interventions. The strong British presence in colonial Lagos ensured the institutionalization of epidemic management, mechanism and administration against the local tensions to colonial Plague control measures. This section explores the interactions between formal disease administration on the one hand and local responses on the other. The media and administrative conception of Plague as a disease of insanitary spaces is examined vis-à-vis the resistances to racialized anti-Plague measures that involved harsh movement restrictions, demolition of buildings especially native quarters like Oko Awo. The inadequacy of biomedical healthcare made the homes of native healers the first point of call for most of the sick as demonstrated by the unofficial index case. While religious and ethno-medical interventions have largely evaded the literature, their significance in the anti-Plague campaign is unmasked.

Chapter Five: Impact of Bubonic Plague on Lagos

The chapter showcase the effects of colonialism and its attendant inter-cultural encounter in Plague control. A particular attention is directed to the influence of this phenomenon on the conception of public health in Lagos overtime. An emphasis is placed on the historical effect of the Plague on population health and labour productivity, public expenditure, international and internal trade, food security, urbanization and social equity. No doubt, the Plague with its attendant epidemic shock projects colonial Lagos in its historical dynamics.

Chapter Six: Summary and Conclusion

The chapter summarize the analysis and draws conclusion on the study.

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CHAPTER TWO

PUBLIC HEALTH AND DISEASE PROCESSES IN LAGOS BEFORE 1924

2.1 Lagos and Her Peoples

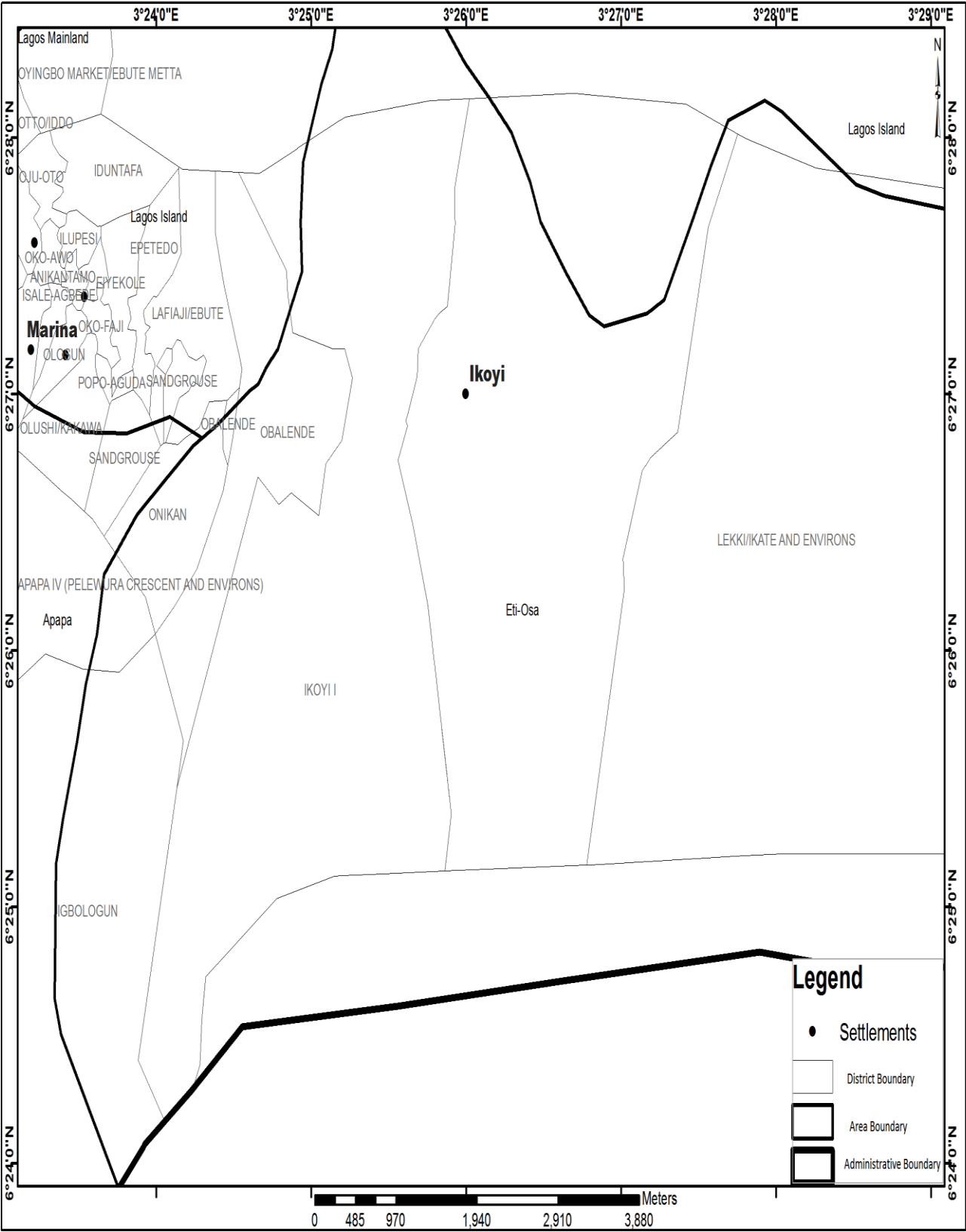
The two major versions of the history of origin of Lagos are the Yoruba and the Edo-Benin narratives. These traditions agree that the city was originally settled by migrant fishermen, farmers, and warriors from Ile-Ife, Mahin, and Benin.¹ Indeed, linguistic evidence suggests that the language more indigenous to Lagos is the Awori-Yoruba. As observed by Samuel Ajayi Crowther, Yoruba was the primary language of Lagos in the nineteenth century.² The short-lived nature of Benin military incursion on the Island during the 16th and 17th centuries has been confirmed in the oral tradition relating to the origin of Lagos – the *Losi's History of Lagos* as well as the European travellers account.³ Its vast natural resources - lagoons, marshlands and geostrategic location on the West African coastline served as a pull factor that encouraged waves of local settlers and foreign opportunists.⁴

Lagos witnessed an unprecedented influx of migrants of diverse background at the inception of colonial rule. Early colonial Lagos was a multicultural society. This was a society divided across racial and ethnic lines (Yoruba, Europeans, Nago/Brazilians, Saro/Sierra Leoneans).⁵ Other groups that impacted the socioeconomic and cultural sphere of the port city in the early colonial era include the Lebanese and Syrian traders. As noted by L. Fourchard⁶, while the Yoruba indigenes lives at Isale Eko, the heterogenous European community resides in Marina around the racecourse. 'The town of Saro developed to settle a growing group of educated ex-slaves who came from Sierra Leone. Until the end of the 19th century, these were the main merchants in Lagos and they built

storehouses along the Marina rivalling those of the European merchants'.⁷ Specifically, the Saro of Sierra Leonean origin lived at Olowogbowo.⁸

The beginning of the nineteenth century marked the migration of some formally enslaved Africans in Brazil to Lagos, Nigeria. Their exodus from Brazil was initiated by the series of deportations after the 1835 slave rebellion in Bahia as well as voluntary migration. While many of these migrants moved to the hinterland and elsewhere at the West African coast, others settled on the Lagos Island. The *Nago* immigration into Lagos received an impetus following the establishment of the port city as a British colony in 1861.⁹ The Brazillian immigrants settled at the so called 'Portuguese Town' – Popo Aguda in Lagos (Figure 1).¹⁰ In the face of fierce inter-group and inter-racial competition for local resources this group of migrants eventually assimilated into the native local culture thereby forming a distinct enclave in Lagos by the first quarter of the twentieth century.¹¹ On the other hand, the Lebanese economic incursion in Lagos can be traced to the 19th century worldwide migratory phenomenon. Starting as peddlers of junk goods in the 1900s, P.F. Adebayo observes that the Lebanese emigrants had 'within decades achieved remarkable progress in their desire for economic prosperity through participation in the retail, distributive, wholesale import merchandise trade'.¹²

Figure 1: A Map of Lagos in 1924



Source: Field Research

The sociopolitical and cultural organization of the port city showcases social disparities between the traditional ruling elites, colonial authorities, Christians, Muslims and the traditionalists.¹³ This racial and ethnic differentiation manifested at spatial levels up to the first quarter of the twentieth century when each group inhabited separate enclaves of the colony.¹⁴ Subsequently, urban growth and the pressure on poorly footed and mostly inexistent infrastructure in non-European areas led to public health challenges such as epidemic outbreaks. The colonial and local responses to this urban debacle constitute the transformational urban politics and manoeuvrings that marked the later end of the colonial era.

2.2 Public Health and Disease Processes in Pre-colonial Lagos

In reconstructing the history of Bubonic Plague in colonial Lagos, it is pertinent to examine the nature of disease processes in pre-colonial Lagos as a springboard for the present study. By 1850, at the eve of British bombardment and colonization of Lagos, the predominant diseases in the settlement were mainly endemic and the majority of the local population had developed genealogical resistance to them.¹⁵ These are gastro-intestinal infections like dysentery, diarrhoea, and typhoid fever as well as vector borne diseases such as diarrhoea, yellow fever, and malaria. As observed by P.D. Curtin, having experienced these infections at childhood, most West Africans ‘acquired an apparent immunity’.¹⁶ This explains the high mortality rate recorded among European adventurers and colonialists at the onset of colonial military expeditions in the region during the 19th century.¹⁷

However, it has been noted that infectious diseases such as Smallpox (*Soponna*) and Gonorrhoea (*atosi*) existed in pre-colonial Lagos and its chain was often

successfully truncated by local traditional knowledge and ingenuity.¹⁸ Hence, such cases of infectious disease manifestation ‘did not take [a major] epidemic dimension in pre-colonial Lagos whose estimated population was five thousand inhabitants in 1800’.¹⁹ In discussing disease processes in pre-colonial Lagos, two major epidemics are adopted as a guide. These are smallpox and venereal disease epidemics. Indeed, an epidemic of vital relevance to the pre-colonial discourse of disease processes in Lagos is Small Pox. Smallpox is an infectious disease, caused by the *variola* virus. Smallpox symptoms include fever, malaise, headache, prostration, severe back pain, and sometimes abdominal pain, vomiting, body temperature, and rash which appear on the face, hands and forearms, and later on the trunk.²⁰ After the infection, there is an incubation period of about thirteen days, in which the virus is cultured. In the incubation period, the victim is asymptomatic. Following the incubation period, symptoms such as headache, fever, chills, nausea, and backache, sometimes with convulsions or delirium appears for about four days after which the fever returns with rash. Smallpox complications may result in disfiguring, scars, blindness, pneumonia, bronchitis, respiratory complications, bacterial skin infections, arthritis, and encephalitis.²¹ The *variola* virus is transmitted from person to person through infected bodily fluid and articles. This is often the case in poor ventilated apartments and enclosed settings such as public transportation facilities. A carrier of *variola* virus is not infectious during the incubation period but becomes infectious with the first appearance of the rash to the end of the sickness.²²

There are limited scholarly studies on the history of smallpox epidemic intervention in colonial Lagos. As observed by W.H. Sneider, ‘the history of smallpox in Africa during colonial rule is a relatively neglected subject’.²³ The study of smallpox is fundamental to the understanding of social determinants of disease process in pre-colonial Lagos due to its

significance in Africa.²⁴ This is particularly the case of the existence of smallpox divinity and the interpretation of the viral manifestation as a punishment from the terrestrial world. Thus, the traditional priests were at the centre of smallpox diagnoses and treatment before European incursion. The study of smallpox control provides a rich background to the understanding of African responses to epidemics as well as the colonial interpretations and intervention mechanism. The study of smallpox is particularly important as it showcases an eradication of an ancient disease through ‘global public health efforts as well as African method of variolation and disease prevention that preceded the colonial era and how this indigenous knowledge was transferred to the West (rather than the other way round)’.²⁵

The spatial base of Lagos in the Yoruba culture area influenced the city’s traditional disease control mechanism. In Yoruba religion, the divinities are called *Orisa*. It is generally believed that the divinities have the attributes or qualities or characteristics of the Supreme Being, and they are in consequence, emanates from God. According to Yoruba theology, they were brought forth by Olodumare to serve as ministers and functionaries in the theocratic government of the universe. The divinities are many, and their number varies between 201, 401, 600, and 1,700. They have their shrines, temples, devotees, priests and priestesses, and they are offered worship and receive day-to-day sacrifices. Technically they are intermediaries between God and man. *Soponna*, the divinity of smallpox disease is prominent in this regard. He is dreaded in that he manifests the wrath of God, and he punishes offenders with smallpox. His punishment must be accepted with cheerfulness, joy, gratitude and without complaint or mourning. The property of a victim is confiscated by the priests who only have the right to bury him/her.²⁶ Thus, smallpox epidemics were interpreted by the native inhabitants as a punishment from the Yoruba god of smallpox – *Soponna*. Thus, public health situation at the turn of the

nineteenth century was such that the religious priests of *Soponna* were the doctors diagnosing and treating smallpox epidemic in Lagos.

At the onset of colonial rule, a comprehensive account of endemic diseases experienced and the indigenous methods of disease etiology in Lagos were poorly documented in oral traditions and travellers report. However, the case of smallpox stands out and transcends the pre-colonial to the colonial era. Indeed, up to the nineteenth century, the scientific understanding of tropical diseases is weakly based. This was the case in both Anglophone and Francophone West Africa where diseases such as ‘yellow fever’, ‘malaria’, and ‘typhoid’ are often categorized as ‘fever’.²⁷ This makes disease control difficult and epidemic intervention cumbersome.

By the dawn of the twentieth century, vaccination programmes against the scourges of smallpox were introduced to natives of Lagos. The official report for 1904 and 1905 observed an increase in the cases of malarial fever with attendant higher mortality rate. However, ‘the number of cases treated at the Contagious Diseases Hospital (chiefly small-pox) shows a remarkable decrease, due to the spread of vaccination’.²⁸ By 1905, there were 45,410 successful vaccinations performed in Lagos Colony and Protectorate, in spite of the great difficulties presented by what the colonial government referred to as ‘superstition, ignorance, established customs, and the influence of the small-pox god priesthood’.²⁹ The colonial government engaged indigenous medical officers led by Dr. Sapara Williams in the campaign towards the institutionalization of biomedicine among the natives as the standard remedy to fight infectious diseases. Thus, local misunderstandings surrounding the colonial vaccination programme were laid to rest. As it was discovered that the ineffectiveness of the vaccine was as a result of cultural practices such as smearing the wounds with palm oil which rendered the secreted lymph useless.³⁰ Others avoided the vaccination exercise due to its unpleasant after effects such as the

development of fever and sores.³¹ By 1897, the rampant outbreak of smallpox in the Epe area of Lagos made indigenous medical officials to consider the social pathology of smallpox epidemic. Dr. Sapara Williams engaged this subject through participant observation by joining the smallpox cult. According to Sapara, the smallpox viral strain scrapped from patients was used as biological weapon by the *soponna* priests. According to Sapara:

In 1897 when I took charge of Epe district, the town of Epe was known as the hotbed of small-pox epidemic. Finding that vaccination and other precautions seemed to fail, I joined the cult and having got into the mysteries I summoned the small-pox priests together, and threatened them with prosecution for disseminating the disease... They left the town through disgust and since then, up till the time I left Epe, vaccination had scope for doing good work and then the town enjoyed immunity from small-pox, hitherto unknown.³²

Consequently, the colonial government amended the Witchcraft and Juju Ordinance to include the proscription of the *Soponna* cult. This measure allegedly led to the decline of smallpox epidemic in Epe, Lagos.³³ While this phenomenon seems to show that smallpox virus was used as an instrument of socioeconomic, religious and political control by the *Soponna* cult, it can as well suggest native ingenuity based on the traditional method of variolation. After all, the small pox vaccine is a bye product of the smallpox viral strain. This traditional method of variolation or inoculation was used to immunize an individual against smallpox with viral taken from a patient. This indigenous ingenuity may as well be a major contribution of African traditional medicine to orthodox medical care.

Furthermore, another important epidemic disease of relevance to pre-colonial studies is venereal disease epidemic such as gonorrhoea. Sexually Transmitted Infections (STIs)

are formerly known as venereal diseases. According to the World Health Organisation, 'there are more than 30 different sexually transmissible bacteria, viruses and parasites. Of the 8 most common STIs, 4 are currently curable: chlamydia, gonorrhoea, syphilis, and trichomoniasis. The other 4 are viral infections and are incurable: hepatitis B, herpes, HIV, and human papillomavirus (HPV)'.³⁴ Gonorrhoea is a venereal disease caused by the infection of *Neisseria gonorrhoea* bacterium. Gonorrhoea, at times, is asymptomatic, however, infected persons may develop burning sensation during urination or testicular pain, vaginal discharge and bleeding, and pelvic pain. Gonorrhoea complications may result in pelvic inflammatory disease and inflammation of the epididymis leading to infertility as well as joint and heart infections. It is often spread through oral, anal or vaginal sexual intercourse with an infected person.³⁵ The earliest recorded antecedent of Gonorrhoea epidemics is traceable to the enactment of venereal disease control Acts in the Britain in 1161 and in France in 1256 which banished the infected persons.³⁶ This was soon followed by medieval decrees compelling the public treatment of the victims.³⁷

It is not surprising therefore that the first recorded cases of venereal disease epidemic including in Lagos appeared in the colonial archives at the end of the nineteenth century. While diseases such as gonorrhoea existed among the natives in the pre-colonial era, its sudden rise to prominence in colonial Lagos, is no doubt, traceable to the introduction of western urbanism and the Afro-European sexual encounters. Indeed, Lagos witnessed an endured epidemic of venereal diseases from the onset of the twentieth century.³⁸ The widespread occurrence of venereal diseases such as gonorrhoea especially among the soldiers of the West African Frontier Force based in Lagos was a major concern of the British colonial administration.³⁹ S.A. Aderinto⁴⁰ observed that despite the rising trend of venereal disease epidemic among the civilian population, the colonial government was more focused on epidemic abatement among the West African Frontier Force. By 1923, it

is noteworthy that civil society organisations such as the Lagos Women's League (LWL) urged the colonial government to criminalize prostitution and erotic magazine reports which they described as the drivers of venereal disease epidemics in the city.⁴¹

The social determinant of the rise of venereal diseases can be seen from the economic and cultural situations of colonial Lagos. On the one hand, the high incident of poverty among migrant native population and the high demand for sex by soldiers of the colonial military had stimulated a market for sex trade. Culturally, the predominance of STDs among soldiers and the idea that sexual intercourse with under-age girls could be an effective cure of venereal disease increased the patronage of juvenile prostitutes.⁴² While the cultural and indigenous perceptions of venereal disease as 'Arun Gbajumo' (disease of the elites),⁴³ helped sustain sexual recklessness in the city, the initial neglect of the civilian population showcases the place of colonialism and racial discrimination in colonial public health system in Lagos. Thus, the mild occurrence of epidemics in pre-colonial Lagos is not far-fetched from the Afro-centric cum ecological configuration of the natural environment and the potency of native medicine and philosophy in disease prevention and control as well as the manageable social structure of the settlement.

2.3 Public Health and Disease Processes in Colonial Lagos Before 1924

This section examines the transformation of the disease environment in Lagos due to European imperialism. It therefore addresses how colonialism did alter the pre-colonial disease environment before the outbreak of Bubonic Plague in Lagos. Indeed, cases of epidemic outbreak became prominent in Lagos at the close of the nineteenth century and were virulent in the first half of the twentieth century.⁴⁴ This epidemic pattern has been the landmark of colonialism around the world – from the dangerous

epidemics that trailed the European conquest of the American Indian society,⁴⁵ to the unprecedented Venereal Disease infestation of colonial South Africa.⁴⁶ As noted by F. Cox, ‘the Amerindians succumbed to smallpox; they had no hard immunity and the new diseases they encountered were so virulent that they had no time to adapt to them’.⁴⁷ Considering the foregoing, this question arises: How did colonialism impact disease processes in Lagos?

The European incursion in West Africa was a watershed in the culture-nature nexus. The European arsenal of industrial revolution and philosophy of human settlement necessitated the force-feeding of European structures on African primordially sustained eco-systems. This phenomenon included the movement and interaction of human and animal species of diverse origins. The resultant environmental and cultural changes present new challenges of infectious disease processes. Indeed, colonialism played a major role in the dispersal of infectious diseases around the world. As observed by A. Bewell, ‘colonialism may not have created new pathogens, but it did bring people who had previously been isolated into contact with each other and with diseases that were new to them...During the colonial period diseases began to travel as never before...The boundaries that historically separated these disease environments were breached as new pathogens were exchanged on a scale far greater than ever before’.⁴⁸ The European expansion into the New World and the Global South was a landmark in the globalisation of infectious diseases. This is not unconnected with the new encounters between European adventurers and the native population, an interaction that in many cases involved sexual relations of both human and animal species.

In West Africa, the Europeans encountered endemic diseases such as malaria and yellow fever of which they had little immunity. The depopulation of the European migrants soon earn the region a new name – ‘the white man’s grave’.⁴⁹ This debacle restricted European influence in the region to the trading forth in the coast up to the nineteenth century. By the second half of the nineteenth century, the Europeans had devised new measures of adaptation to the West African environment. This methods include the introduction of vaccination and tactical quarantining measures that involved the segregation of native enclaves. By the first quarter of the twentieth century, improved transportation technologies, rapid population growth and transborder flows especially in commercial and colonial administrative center such as Lagos necessitated increased interaction between European migrants and the indigenous population. This circumstance witnessed cross-fertilization of transborder and endemic infectious diseases. While many casualties were recorded among the European migrants, the local populations suffered the most under a segregated colonial public health system. Indeed, the use of the term ‘colonialism’ in historical epidemiology ‘points to a core truth about the social determinants of health. The forces that systematically mould and influence health are humanly factored, socially influenced and unequal’.⁵⁰ As noted by K. Czyzewski:

The social determinants of health are the environmental causes of ill health that affect populations. They point to evidence that highlights higher susceptibility to illness and disease as a product of particular socio-economic and physical environments. Considering these environments are socially constructed, it seems reasonable to conceptualize addressing these determinants through the generation of social welfare policy and infrastructural adjustments.⁵¹

In the colonial era, the restructuring of Lagos to function within a global network of European capitalism compelled its transformation into a modern squalor in the face of administrative neglect and inherent quest for resource exploitation by the end of the 19th century.⁵² As at 1898 the city was saddled with an inadequate sewerage system. According to the Colonial Report for 1898, 'there are hardly any drains, and what there are ...both land latrines and latrines over the water'.⁵³ Corroborating the foregoing, the Colonial Report for 1899 posit: 'Lagos itself is practically nothing more than a sand bank, and there appears to be little left to hope for except that before many years are past it may be found possible to remove the government to an inland position, where proper sanitary conditions may be instituted'.⁵⁴ In 1902, the colonial government described the living condition in the city as 'the construction of the town where some 40,000 persons are collected mainly in native huts, the overcrowding of these latter, the absence of household slop water, of surface drainage, and of sewage disposal – all constitute obstacles to the attainment of even a moderately high standard of sanitation'.⁵⁵

By 1908, W.J.R. Simpson's Sanitary Report for West African British colonies affirmed the unsanitary status quo of the region. According to this report:

The attempt to make the towns and villages of West Africa healthy under the existing system is a Sisyphean task, because of no comprehensive grasp of the many-sidedness of sanitation and the relation of each to one another, no very definite object in view, no special organization for the purpose, and no continuity. In the time unoccupied in the treatment of patients and in the study necessary to keep himself abreast of the times one medical man may take an interest in the condition of the drains, another in the abolition of pools, another in the construction of houses, another in the water supply, another in conservancy, while others may be more interested in research work or in medicine or in surgery, and do not pay attention to practical

sanitation though interested in the causes which give rise to disease in the locality.⁵⁶

W.J. Simpson noted that ‘the sanitation of Lagos and of the settlements on the islands and mainland close to it is accordingly of the highest importance. The difficulties to be overcome in rendering Lagos a healthy place are much greater than those at Freetown or Accra because of the peculiar situation and configuration of the island on which it is erected... The lagoon itself is health-giving except where it receives the sewage and refuse of the town. Its broad expanse removes to a distance mangroves and swamps, which if nearer would render Lagos more unhealthy than it is and add enormously to the expense and difficulty of converting it into a habitable and healthy place’.⁵⁷ As observed by L. Bigon,⁵⁸ early colonial Lagos was far from being an incarnation of a system of disciplinary power in terms of urban form. The colonial authorities oscillated between two poles concerning colonial urban space - they were dissatisfied with the overall ‘unsanitary’ impression of the city of Lagos however, in contrast they were not ready to commit themselves to this purpose, as sanitary reforms were not perceived as a legitimate target for public expenditure thereby making poor sanitation a continuum in the history of the city.⁵⁹ Thus, the sanitary challenge of the city of Lagos was noticed by the colonial government but very little was done to address the situation up to the first quarter of the twentieth century.⁶⁰

Thus, the relationship between colonialism and public health is two fold. Colonialism impacted public health through the globalisation of infectious diseases as result of colonial encounters. On the other hand, while colonialism serves as a vehicle of pathogene exchange, it helped institutionalize epidemics through deep rooted social stractification and inequality in colonial societies. In illustrating the pattern of public health in colonial

Lagos, the examination of the interplay between colonialism and epidemic control becomes imperative. The aim is to explore the nexus between African indigenous knowledge about disease processes and orthodox health care system as well as the health impact of globalization and European incursion in Lagos. To this end, a concise history of the Influenza (transborder) epidemic (1918-1919) that predates the Bubonic Plague in colonial Lagos is examined in the subsequent section.

2.4 Influenza Epidemic of 1918-1919

The world witnessed a pandemic of Influenza in 1918-19 characterized by high level morbidity and mortality. The genetic structure of the virus is believed to be a form of swine and avian influenza strains characterized by a pneumonic complication and an excessive accumulation of bloody fluid in the lungs of its victims.⁶¹ This is a highly contagious disease caused by infection from influenza type A, B, or C virus. This is the infection of the upper airways and lungs. In an infected person, symptoms appear between one to three days. This can be transmitted to other persons two days before symptoms appear and in the course of the illness. The symptoms of influenza include fever, dry cough, muscle and joint pain, tiredness and fatigue, headache, sore throat, and stuffy nose.⁶² Influenza spreads through infected bodily fluid that is dispensed through coughing and sneezing.

The outbreak of 1918-1919 became a global issue due to improved transport technology (steam ship, motor cars) and speed of cross-border migration. It was the first major pandemic of the twentieth century. The pandemic spread speedily around the world from Europe to Asia, America, and Africa. The first outbreak occurred in March 1918 among army recruits at Camp Funston, Kansas, USA where it spread quickly across the

United States and reached Europe by early 1918, apparently with the arrival of American troop ships in April. As observed by J.M. Barry⁶³ the First World War might have created the pandemic due to overcrowded military camps and mobility of the troops. The widespread but essentially non-lethal strain of the flu mutated into a deadly killer by the last quarter of 1918 due to passivity of the warring countries in the face of the epidemic. Whereas the focus was on the on-going War, political elites and policy makers underplayed the reality of a rapidly growing Transborder epidemic. The influenza pandemic moved across Europe and had reached India, Australia and New Zealand, France, and Sierra Leone by August 1918. By early 1919, the virus afflicted England and Wales as well as Australia, and other countries in the southern hemisphere.⁶⁴ The Influenza pandemic of 1918-19 accounts for the untimely death of about 100 million people worldwide.⁶⁵ This statistic when compared with the casualty of the First World War (1914-18) shows that this pandemic killed more people than the war itself.⁶⁶

In West Africa, the first Influenza outbreak emerged in Sierra Leone and was subsequently spread to Ghana by August and Lagos Nigeria by September 1918. The commercial and social linkages between colonies of British West Africa made cross-border morbidity inevitable. This is obvious in the assertion of the colonial office that all ships entering Lagos, especially those from Britain, should be considered infected.⁶⁷ Affirming the foregoing, Lagos witnessed influenza outbreak on 14 September 1918.⁶⁸ As noted by the Annual Report, Nigeria, 1918:

The great pandemic reached Nigeria towards the end of September, raged during October, and declined rather abruptly in November. Imported into Lagos by sea from the Gold Coast, in spite of unremitting efforts on the part of the Sanitary Authorities, it was but a matter of time till the disease had spread all over the country. Calabar was the last to suffer owing to the infrequency of the shipping service between

there and ports to windward, and the epidemic was at its height there when it had practically died out in Lagos. The epidemic did not present any features different from those observed in other parts of the world, unless it was in its severity. Gastro-intestinal types were rioted, but in the great majority of the cases the brunt of the disease fell upon the respiratory system. All the deaths among Europeans were due to septic broncho-pneumonia.⁶⁹

The earliest recorded cases involved the crew men who contracted the disease and fell ill on board the SS-Panayiotis on the Iddo wharf, Lagos. They were subsequently diagnosed of the disease and quarantined, while the Ship was disinfected and isolated. Similarly, the SS-Ashanti arrived from Sierra Leone with six passengers diagnosed with influenza. Before mid-September, 1918, the pandemic was considerably under control. The arrival of a merchant ship, SS Bida from the Gold Coast on the 14th September with 239 unscreened passengers led to a major outbreak of the disease in Lagos. Thus, the port of Lagos was officially declared infected on 25 September, 1918. The colonial government responded by establishing an observation hospital in 26 September, 1918 where prospective carriers were diagnosed and monitored.⁷⁰ The pandemic overstretched both human and material resources of the colonial government. It was not surprising therefore that the colonial authorities applied a public health policy aimed at protecting the uninfected rather than curing the victims.⁷¹ In estimating the morbidity and mortality levels for 1918, the colonial government reports:

It is difficult to estimate either the incidence of the disease or the mortality. In Lagos where there is a properly organised Health Department and where registration is compulsory, it is possible to arrive at a vague estimate. From statistics taken from such sources as prisons, Police Force, West African Frontier Force, and Government employees, a case incidence of 50 per cent, with a mortality

of 5 percent, would probably be a low estimate. Among the poor and intensely ignorant both the incidence and mortality must have been very much higher. It is estimated, from the Register of Deaths and a comparison of the death rate during the epidemic with the same periods in previous years, that 1.5 per cent, of the population of Lagos died of influenza. 418 Europeans came under treatment of which 15 died, a mortality of 3-5 per cent. This is, however, a very low estimate of the incidence of the disease, as many suffered in remote districts where medical aid was not available.⁷²

In 1919, Influenza persisted but in sporadic form only. The colonial authorities reported 216 additional cases with 14 deaths recorded in the southern provinces.⁷³ According to official statistics, about 1,200 people died of the pandemic in Lagos from its onset in 1918 to its end in 1919. This figure accounts for 1.5% loss in the city's population.⁷⁴ The morbidity level was high due to a shortage of manpower to fight the disease. This was largely owing to the fear of contagion, as some members of the spraying gang employed to disinfect possible influenza reservoirs became infected and absconded for fear of being ill-treated in the colonial quarantine system. This local response encouraged self-medication and consequently increased the morbidity and mortality levels. In order to control the pandemic, the inspection of homes by sanitary inspectors was a sine-qua-non. The visitations of sanitary inspectors (mostly Europeans) were coldly welcomed by the natives. This cultural shock led to urban exodus and the eventual recruitment of natives as sanitary inspectors in order to ensure mutual confidence between the colonizer and the colonized. Other measures involved school closure, prohibition of religious and public meetings. The mortality level called for several rounds of funeral services thereby overstressing the services of the clergy, grave-diggers, and undertakers.⁷⁵ This is obvious in the high death rate recorded (from all causes) in the

period, that is, 3,254 people in 1918 against 2,167 in the previous year and 2,256 in 1919 marking the end of the pandemic.⁷⁶ Furthermore, the impact of the epidemic in colonial Lagos was captured by the CMS. Gleaner, a newsletter of the Church Missionary Society⁷⁷ as follows:

An epidemic of influenza visited the whole of the West African coast towards the end of last year, and Lagos suffered heavily. At the end of November, Mr. CW. Wakeman, who has charge of the CMS Bookshop, wrote: - The recent epidemic of influenza broke an otherwise good record. Our native staff suffered heavily, between fifty and sixty being absent from the bookshop and printing press for a fortnight or so when the epidemic was at its worst, and only about twenty-five percent of the whole being able to attend their work. Two died from the sickness...For a week or two Lagos was almost like a city of the dead, business being practically suspended and the streets quite deserted. For six Sundays the churches were closed, and the schools for about seven weeks.⁷⁸

The above micro-narrative shows that the cumulative effect of the pandemic must have disrupted labour productivity and markets as well as educational development. The extent of this economic shock is obvious in the analysis of the city's economy in the pre-influenza era, during the First World War (1914-18) and in the post-influenza period. 'The establishment of British rule and the imposition of 'free trade' on the hinterland states consequently facilitated the commercial prosperity of Lagos'.⁷⁹ The port city enjoyed colonial administrative goodwill from its merger with the Southern Protectorate and the amalgamation of the Northern and Southern Protectorate of Nigeria in 1914 - it continually served as the centre of colonial administration and an entreport of international trade. Indeed, international trade played a major role in the pre-war economy of the city. As observed by B. Lawal⁸⁰ between 1880 and 1906, customs duties on imported goods provided an average of 84% of its annual revenue.

The incorporation of the port city as a junior partner in the global network of trade witnessed a progression in the production of cash crops. This phenomenon served as a pull factors that drew foreign migrants - European merchants, ex-slaves from Sierra Leone, Liberia, Brazil and Cuba as well as refugees living in the hinterland.⁸¹ Moreover, 'there were the attractions of city life, not least the commercial prospects which were thought to exist in Lagos while...socio-economic pressures in the hinterland...were strong 'push' factors...Hence, Caravan traders, labourers, porters and seamen sought employment in the city'.⁸² However, the shock following the influenza outbreak of 1918 implies a change. As noted by the Annual Report of 1918, 'plantations of cocoa and cotton also suffered considerably from the same causes, and in the case of cocoa this was accentuated by the low prices offered locally during the early part of the year and to the temporary closing of markets. In many cases the prices offered for cocoa were so low that growers were not even able to harvest and cure the crop at a profit.'⁸³

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CHAPTER THREE

ORIGIN AND DIFFUSION OF PLAGUE IN COLONIAL LAGOS AND ENVIRONS, 1924-1931

3.1 Origin of Plague in Colonial Lagos

While Epidemiology is the study of the occurrence and transmission of disease in human population, Historical Epidemiology as a branch of History explores the histories of disease processes over time and space thereby creating the firm basis for the understanding of public health practice and outcomes.¹ Indeed, to control a disease, it is imperative to understand its origin, source, and pattern of diffusion. It is on this note that this chapter examines the origin, source and pattern of transmission of Plague in colonial Lagos.

It was at the turn of the nineteenth century and the dawn of the twentieth century that epidemics became a major challenge to the native population of West Africa. While endemic diseases like malaria, yellow fever, typhoid, diarrhoea and dysentery dissipated European migrants, soldiers and adventurers in the region, such eco-bound diseases were generally tolerated by the natives due to childhood and genealogical immunity.² The extant accounts of unprecedented cases of infectious diseases in the region dates back to a severe Plague outbreak in French Grand Bassam (Ivory Coast) in 1899 and the subsequent outbreak in the Gold Coast in 1908 and Senegal in 1914.³ This was followed by Spanish Influenza that swept the entire West coast of Africa from 1918-19.⁴ As noted by K. Ngalamulume, the outbreak of the Plague in West Africa was the latest in the series of epidemics that ravaged the region since the second half of the nineteenth century.⁵ Bubonic Plague resurged in the Gold Coast in 1924 and for the first time visited the port of Lagos where it endured until 1931.⁶

In the beginning of the twentieth century, infectious diseases previously unknown to West Africa spread through physical contact with increasingly globalized epidemic reservoirs. Globalization processes stimulated by the quest for colonial territories overseas created a space for disease transmission across borders. Spaces are the product of the homogeneity of human and non-human elements in society.⁷ Thus, ‘space forming forces make a part of local things and actors connected to new systems, new networks of relations; these things, actions become part of global spatial structure’.⁸ This process, driven by colonialism especially since the nineteenth century in West Africa, is not unconnected with changes in local disease environment characterized by unprecedented zoonotic epidemic outbreaks. As observed by M. Ziegler,⁹ ‘diseases spread by these mechanisms are best understood by considering the entire living and non-living environment in order to understand the persistence of the microbe in the environment among animal hosts, its transmission and the progress of a human epidemic’.¹⁰ This conception of landscape epidemiology,¹¹ is expanded in this chapter to capture the transboundary historical epidemiology of racialized Afro-European cultural encounter on the one hand, and human-nature interaction on the other.

Since the mid nineteenth century at the onset of European colonization in Lagos, the natural environment of the settlement never remains the same again. The forceful subjugation of the African space under European international spatial order impacted nature and culture. As noted by L. Fourchard, ‘since the 19th century, in fact, Lagos has been at the forefront of new cultural and social practices in Nigeria’.¹² Subsequently, the port city received an impetus for accelerated urban growth since 1914 when it became the capital of the amalgamated Southern and Northern Nigeria.¹³ The history of Bubonic Plague in Lagos investigates the sociocultural and historical contexts of these changes

which are considered lacking in the study of disease processes in Africa.¹⁴ This is done by a critical analysis of the historical epidemiology of the Plague outbreak in colonial Lagos.

The European intercourse with West Africa was first consummated at the coastal regions. This was an episode in the rapid process of globalization that greeted the modern era. By the onset of the nineteenth century, Lagos as well as other coastal settlements such as Accra (Gold Coast), Saint Louis and Dakar (Senegal), as well as Quidah (Benin) were major slaving ports in West Africa.¹⁵ In the case of Lagos, it was bombarded by the British in 1851 and later annexed in 1861 in line with the new direction of the global economy – to abolish the slave trade, create a military and administrative base for European further exploration and exploitation of the West African interior.¹⁶ The ‘progressive substitution of the slave trade with the palm oil industry and the consolidation of the position of Lagos on the West African coast attracted European merchants, freed slaves from Brazil and Cuba, slaves freed by the British on the coast and refugees from the interior’.¹⁷ This phenomenon was consolidated with the evolution of commercial agriculture in the region (e.g. cocoa, cotton, kola nut plantations). The development of transportation networks for the shipment of commodities across the West African coast to the outside world and the linking of these ports through railways to the interior made a geostrategic location like Lagos, the major ‘interface between the hinterland of the main and most populated of the African British colonies and Britain’.¹⁸ Consequently, colonial port cities such as Lagos in West Africa soon turned into hotspots of inter-regional trade with the consequent transmigration of pathogens and infectious diseases. In the same vein, K. Ngalamulume, observes that the process of growth in Saint Louis, Senegal ‘in the context of international commerce and travel’ created unsanitary conditions favourable for the outbreak of infectious diseases in the early colonial era.¹⁹

The Third Plague Pandemic emerged from China in the mid-nineteenth century. This outbreak continued to spread across different ports globally. It was transmitted to West Africa in the late nineteenth century. The pattern of its transmission reveals how ports in colonial West Africa served as conduit for the proliferation of infectious diseases across state boundaries. As noted by E.K. Akyeampong, ‘disease, together with the environment, set some of the important parameters within which West African societies and communities have operated, reflecting the challenges of both settlement and ecology, as well as documenting the history of contact between peoples’.²⁰ No doubt, in the late nineteenth and early twentieth centuries, Plague was new to West Africa, which seemed to have escaped two earlier pandemics – the Justinian Plague of 542CE and the Black Death of the mid-fourteenth century. However, West Africa experienced the third pandemic Plague due to its intense intercourse with Europe and its subsequent incorporation into the European Empire and the global economy.²¹ Indeed, ‘between 1894 and 1914, a wave of Bubonic Plague epidemics spread across the world, by way of sea routes that had been created by the European forces. From Australia to South Africa, it finally reached North and West Africa, hitting Grand-Bassam (Ivory Coast), Accra, and Dakar’.²²

This is a transborder transmission of Plague pathogens across national territories in West Africa due to international migration and trade. The total number of cases recorded in the Gold Coast in 1908 is 336 with 288 fatalities. While Accra was the worst hit in 1908, the port town of Secondi was the epidemic hotspot of 1924.²³ Despite Government intervention in combating the epidemic and prevent its spread, the infection persists and outbreaks were recorded sporadically. The interconnectivity of British West Africa, especially the Gold Coast and Nigeria made the eventual transmission of the epidemic to Lagos through sea-borne trade inevitable by 1924. A report entitled ‘Iku Ojiji’ (sudden

death) in the local Yoruba newspaper, *Eletí-Ofe* of 6 August 1924 documented the outbreak as follows:

*A nri iro gbo lemolemo pe iku ojiji po nisisiyi larin wa.
Iwe kan ti a ri gba lowo ore wa kan ni o so funni pe eni
meji, tabi meta nku ni ile kanna lojo kanna ati lakoko
kanna. A ro pe awon Onitoju Ilera-ilu yio se ikiwo iku
ojiji wonyi, ki Alafia ba le to wa. Oluwa jowo mase san
a fun wa gege bi ese wa o.*²⁴

The above commentary (in Yoruba language) noted with apprehension the incessant sudden death of two or three people in the same house in Lagos and the obligation of public health official to live up to expectation by ensuring the safety of the populace in face of the virulence. Furthermore, the commentator prayed against divine punishment that may have risen from the sins of Lagosians.

The first official case of Bubonic Plague infection was diagnosed in Lagos on 28 July, 1924.²⁵ Informally, prior cases had occurred before this date but it was the sudden death of the entire family and servants of Momo Bogobiri, an international kolanut importer that brought the outbreak to the public limelight on 7 July, 1924. This localized serial mortality was independently noticed by a local herbalist.²⁶ Based on the colonial administrative records, it is clear that the Plague bacterium infection was transmitted to Lagos from Coomasie, a port city in the Gold Coast (now Ghana) which had been battling with the surges of a Bubonic Plague Epidemic since 1908. As noted on the 30 July 1924 in a memorandum correspondence between the Deputy Director of the Sanitary Service and the Director of the Medical and Sanitary Service, Lagos, ‘the infection was introduced by infected fleas in clothing by some of the Kola traders associated with Momo Bogobiri [an importer of kola nut in Lagos] during the period 5th May to 17th June when quarantine against the Gold Coast ports was raised. It is known that Momo Bogobiri received a consignment of Kola from Coomasie on the 15th of June’.²⁷

The official index case diagnosed in a post-mortem examination on the 28 July 1924 was a case of Dan Sokoto, a Hausa kolanut trader.²⁸ Dan Sokoto ‘dealt with consignments of Kola from coomasie on the 15th and 25th June’.²⁹ He acted as a foreman to Momo Bogobiri, an importer of Kola who mysteriously died on the 7 of July 1924 with several of his family members and servants.³⁰ This is a clear case of an epidemic outbreak emanating from transborder maritime trade in Kola nut between the Gold Coast (now Ghana) and Nigeria. Indeed, there was a considerable trade in Kola nuts between the Gold Coast ports and Lagos in which between 400 and 500 tons of Kola was sold on a monthly basis, which accounted for a total of 7, 430 tons of kola in 1923.³¹ The index case had been traced to this intra-regional trade. In the infected area there were four Kola nut dealers, namely, Momo Bogobiri, Momo Lagos, Adamu, and Abu Saliga. While Bogobiri, Lagos, and Adamu acted as forwarding agents for consignments of Kola which were brought from the Gold Coast accompanied usually by a few servants, Saliga traded on his own account and travelled to and fro between the Gold Coast and Lagos. It was believed that the infected fleas were imported in the boxes of the men who accompanied the consignments of Kola and lodged in the Oko Awo area of Lagos.

According to the colonial administrative report, on the 25th of June 1924, a cable was received from the Gold Coast intimating that these men had evaded the medical inspection at the seaport in Ghana.³² It is not surprising therefore, that Oko Awo soon became a reservoir of the Plague bacterium from where it spread to other areas of Lagos through infected rats and person to person contact.³³ Indeed, by 10 September 1924, the Plague bacterium – *B. pestis*-like organisms was already present in rats subjected to microscopic examination in Lagos.³⁴ The spread of infected rats in the port city has been ascribed to poor sanitary conditions that were favourable to rat breeding especially in squalors such as Oko Awo where the outbreak began. As observed by the Deputy Director

of Sanitary Service, Lagos in 1924, 'the sanitary condition of the greater part of Lagos west of the Macgregor canal is very bad and it is difficult to put forward proposals which are financially practicable'.³⁵ This is an end result of congestion, overcrowding and social inequality that pervades an emerging European urban proto-type in a British West African colony.

The areas infected are the most insanitary settlements in colonial Lagos that are characterized by poor drainage and waste management system as well as overcrowding.³⁶ This scenario is reaffirmed in the colonial report of 10 September, 1924 that 'the serious overcrowding in Lagos is a problem of long standing, and the attendant dangers to the public health have been brought forcibly to notice by the present outbreak of Plague'.³⁷ Indeed, urbanisation has been implicated as a major cause of epidemics in developing societies. The origin of urbanization has been traced to environmental determinants such as natural resource bases. The earliest cities were believed to have first emerged in Mesopotamia (Middle East) around the river Tigris and Euphrates reputable for the earliest practice of agriculture and division of labour. This is the case of the city of Uruk founded around 4500CE and, Ur that developed in 3800 BCE as well as the city of Eridu established in 5400CE.³⁸ In West Africa, urban spaces evolved in Ile-Ife, Benin, Kano, Gao, and Timbuktu in the pre-colonial era. The establishment of urban spaces around the world has been attributed to rural transformation brought about by immigration. Pull factors such as socioeconomic and environmental security are believed to have played a major role in this regard. However, urban pattern and grains differs due to local preferences which emanated from economic, cultural and environmental sustainability as well as public health considerations. Hence, the ancient urban centres of Mesopotamia differ from the Egyptian or Greco-Roman prototypes.³⁹ The cost of urban expansion like

environmental degradation appears to have been responsible for a cycle of the rise and fall of ancient urban centres.⁴⁰

While demographic change and consequent overcrowding in urban spaces played a major role in epidemic outbreak in world history, this trend is gradually fading in the contemporary due to the epidemiologic transition characterized by the ‘web of causation’, especially in the developed world.⁴¹ As observed by A.R. Omran, ‘an epidemiologic transition has paralleled the demographic and technologic transitions in the now developed countries of the world and is still underway in less-developed societies’.⁴² The case of Plague in colonial Lagos presents a typical case of a developing society battling with colonial implantation of a spatial order and its ecological implications.

3.2 Taxonomy and Symptoms

The bacteria agent that causes Bubonic Plague is the *Yersinia pestis*. The bacteria multiply inside the flea, sticking together to form a plug that blocks its stomach and causes it to begin to starve. The flea then voraciously bites a host and continues to feed, even though it is unable to satisfy its hunger. During the feeding process, blood cannot flow into the blocked stomach, and consequently the flea vomits blood tainted with the bacteria back into the bite wound. The Plague bacterium then infects a new host, and the flea eventually dies from starvation. Any serious outbreak of Plague is usually started as a result of disease outbreaks in rodents.⁴³ During these outbreaks, infected fleas that have lost their normal hosts seek other sources of blood. While historically, the medical use of the term Plague has been applied to pandemic infections in general, epidemiologically, the term “Plague” applies to bacterial infections that cause buboes. A bubo is a swelling of the lymph nodes. Bubonic Plague is easily transmittable and has a high mortality rate.

However, due to advancement in science and technology, the Plague can now be cured through the use of antibiotics.⁴⁴ *Yersinia pestis*, is a nonmotile, gram-negative, organism belonging to the family of *Enterobacteriaceae*. It is active in patient's bodily fluids - blood, mucus, and bubonic aspirates. This constitutes laboratory specimen for scientific analysis. The bacteria agent *Y. pestis* can be further sub-divided into three strains - *Antigua*, *Orientalis*, and *Medievalis*.⁴⁵ While the *Antigua* strain is present only in regions of Africa, the *Medievalis* is restricted to Asia. Nevertheless, the *Orientalis* strain is a global phenomenon and the cause of the third Plague epidemic.⁴⁶ The identification of the fleas found in rats carried out at the Medical Research Institute Yaba shows that 74% were *Xenopsylla Cheopis* and 26% *Xenopsylla brasiliensis*.⁴⁷

The pathology of Plague can take three forms: Bubonic Plague, septicemic Plague and primary pneumonic Plague. The first, Bubonic Plague, occurs following the bite of an infected flea. Inflammation is suppressed initially and then induced by the uncontrolled growth of the pathogen in the host. The microorganism gains access to the circulatory system via the lymphatic system and reaches high numbers in the liver and spleen. Septicemic Plague is characterized by recovery of *Y. pestis* from the blood of a patient in the absence of a bubo. Death in this case is caused by multiple organ failure. Pneumonic Plague, occurs by seeding of the lungs with the organism following spread of bubonic disease. Secondary pneumonic Plague occurs by spread fulminate pneumonia followed by organ damage and death.⁴⁸

Affirming the outbreak of Plague in Lagos, the Post-Mortem examination conducted in the index case, Isiaka Sokoto, (a male who resided at No. 43 Pedro Street) at the Public Mortuary, Lagos on the 28th July, 1924 read thus:

The body was fairly well nourished. No glands were palpable. On incision of inguinal regions, there was an intense haemorrhagic adenitis

and peri-adenitis detected. Smears and cultures were taken...The Head was not opened. In the Thorax, both lungs showed signs of Broncho-Pneumonia. In the abdomen the spleen was enlarged and congested. The other organs showed no pathological changes...Cultures were taken from the groin glands into nutrient broth and agar. In 24 hours growths were obtained showing gram negative bipolar-staining Bacilli...An emulsion consisting of the 24 hour old growths on agar and nutrient broth were injected into a guinea-pig subcutaneously into the right thigh on 29.7.24...On 2.8.24 the thigh was punctured at the site of inoculation; pus was struck and an examination of smears revealed the presence of staphylococci and gram negative bipolar-staining bacilli (B. Pestis)...On 4.8.24, the guinea-pig died...Smears were taken from the Heart's blood, the spleen, the liver and the lungs...In all the smears, B. Pestis was present.⁴⁹

The epidemic of Plague in Lagos was primarily bubonic. As observed in the Annual report of the Medical Research Institute, Yaba Lagos in 1924, 'Lagos suffered from an epidemic of Plague. It occurred in the latter half of the year. The first definite case, bubonic in type, was found on 28th July'.⁵⁰ Affirming the foregoing local report published in the vernacular newspaper *Eletí-Ofe* on 3 September 1924 posits:

*Nigbati awon Ijoba sa gbogbo ipa ati agbara won, eyiti nwon si mbe lenu re titi di wakati yi, ani lehin tin won ti bu u s'eran, tin won tun bu u s'egun tan, nwon ni Arun tabi Aisan ti o mbe ni gbogbo igboro Eko wa loni ni Arun ti oruko re nje:- Bubonic Plague.*⁵¹

The foregoing report noted that after painstaking efforts of the colonial government and deep rooted investigation into the cause of the epidemic, it was discovered that the disease outbreak in Lagos is called Bubonic Plague.⁵² Describing this pattern of disease manifestation, the colonial Medical officials posit:

The types of cases seen are described as follows: -I. – BUBONIC...Mild cases or pestis minor...patients looked extremely well, the constitutional disturbances being slight. The temperature did not go above 101F...had femoral buboes and one axillary. Diagnosis was made by gland puncture and these cases made an uneventful recovery...Ordinary type with severe

constitutional disturbances. This includes the majority of cases admitted. A feature was the large number with lung complications either broncho-pneumonia or infarcts. Cases had usually a slight cough with a very small amount of sputum...II.-SEPTICAEMIC. Only a few cases were admitted to the Infectious Diseases Hospital. Cases were very collapsed, death taking place in a few days. No definite clinical signs were observed, except a very high temperature and signs of severe toxæmia...III. – PNEUMONIC...Acute type. In most of these cases nothing definite can be made out of the lungs. Headache, pain in the chest and cough complained of. Cough small and suppressed with sputum scanty and frothy at first and later abundant, watery and tinged with blood. The temperature ranging from 104F to 105F, death taking place within two days...Chronic type presents the features of an ordinary pneumonia and it is impossible to give a diagnosis within the first few days unless positive sputum is obtained.⁵³

The increased transformation of the primary bubonic cases to other secondary forms (septicaemic and pneumonic) in 1926 was due to lack of effective biomedical treatment.⁵⁴ Plague manifests in human population as a result of being bitten by infected fleas or through direct contamination of skin lesions or food with infective material. Its symptoms are characterized by high fevers, chills, headache, generalized body pains, weakness, and chest discomfort and swellings under the armpits or in the groin. In the absence of effective anti-biotic treatment, the disease progresses and results in death often within a period of six days. This pattern of clinical manifestation was recorded in cases diagnosed in colonial Lagos. For example, the clinical notes on some of the cases in Lagos are as follows:

Case I: A male aged 28 years. He became ill about twenty four hours before the following symptoms – high fever with pain and tenderness in the right groin. On admission to the Isolation Hospital, he had a temperature of 105 with a rapid feeble pulse. He was slightly delirious and looked exceedingly ill. There was an enlargement of the right femoral glands. They were doughy, and very tender to be touched. The glands were punctured and typical Gram negative bipolar staining bacilli were detected. The patient rapidly became worse. His delirium increased and his pulse became irregular. He

developed a slight bronchitis [and] died suddenly on the 4th day of his illness. YERSIN's serum was given without doing any apparent good. Case II: A female aged 18 years. This patient was one of the contacts from the infected area, and was admitted to the Isolation Hospital on the 23rd August, 1924. She had taken ill 24 hours before admission with the following symptoms. Slight fever accompanied by pain and tenderness in the left axilla. On admission, she did not look very ill; appetite good, temperature 101 degrees. Pulse good. There was tenderness and slight swelling of the glands in the left axilla. Gland puncture was performed with negative results. The patient continued to get worse, the temperature steadily rising to 104 degrees on the 7th day of her illness. The axillary glands became steadily larger and more tender. Gland punctured was performed on four occasions and it was only on the 4th occasion, on the 7th day of her illness that *B. pestis* was obtained. She suddenly became much worse passing into a state of muttering delirium with rapid breathing and died on the 8th day. YERSIN'S serum was also given in this case.⁵⁵

The survivors of Bubonic Plague were often left with the buboes' scarification in the lymph gland areas, either on the neck, armpit or thigh. This is due to the Plague buboes that characterised the disease (Appendix C). Whereas the septicemic form of the disease often leads to the loss of toes or fingers, the colonial records shows that virtually all the victims in this category died before adequate diagnoses in Lagos.⁵⁶

3.3 Transmission and Morbidity

A critical examination of the pattern of Plague transmission and morbidity in colonial Lagos suggests that the rapid spread of Bubonic Plague in the city cannot be divorced from three factors - migration, demographic and environmental change. The first quarter of the twentieth century witnessed immigration and its consequent population growth in colonial Lagos.⁵⁷ This demographic change was stimulated by a new pattern of urbanization and socioeconomic change brought about by European colonialism. The

slave trading coastal towns such as Lagos became the natural points of contacts and the enclave of western type of urbanization in colonial West Africa.⁵⁸ In order to establish effective socioeconomic and political control over the partitioned African culture areas, the colonial administration opened up the hinterlands by establishing easy and permanent waterways, road and railways network. For example, in Nigeria, Lagos-Kano, Port Harcourt-Kano roads were constructed.⁵⁹ The centre point of infrastructural development was the need to open up new sources of raw materials and to promote international trade. To this end, major urban centres such as Lagos, Port Harcourt, Calabar were established along or at the entrance and exit of a major communication route while cities such as Kaduna and Jos served as administrative and natural resource centres.⁶⁰ The new urban centres promoted commercial activities, meets administrative needs and encouraged western culture. In the British Empire, the advancement of seaway technology encouraged inter-colony trading and commerce.⁶¹ As noted by the colonial government in 1925, ‘improved means of communication now make it possible for all classes of manufactured goods to reach the consumer at a moderate cost’.⁶² A. Olukoju observed that against this background, ‘import trade benefited from the provision of transport facilities’.⁶³

The post First World War era witnessed the removal of trade restrictions with Germany. The end of April 1919 marked the end of price restrictions on palm oil in West Africa amidst rising demand for tropical raw materials in Europe. The new opportunities and prospects of trade in West African primary produce brought trade firms into Lagos market. This phenomenon witnessed the rise in the number of European firms involved in export business from 9 in 1914 to 362 in 1919.⁶⁴ The attendant trade boom and high cost of labour witnessed the influx of migrants from the hinterland to take up jobs as labourers.⁶⁵ This led to housing scarcity and high rent as the city became overcrowded. In this

circumstance, slum communities evolved and expanded in bounds with attendant public health implications.⁶⁶

Population growth, dysfunctional urban planning as well as poor environmental health were the symbols of earliest European urbanism implanted in colonial Lagos.⁶⁷ The evolution of the port city as a major nerve of international and inter-regional commerce and the base of political administration created employment and trading opportunities. This served as a pull factor for immigration into the city across West Africa. Migrants relocating from rural to urban areas often constitute strata of society that is Plagued with socioeconomic problems in which poverty is germane. This pattern of migration is a product of rural-urban inequality. Rural poverty in Nigeria dates back to the colonial era. This is traceable to the exploitation and plundering of rural resources by the colonialists. This phenomenon was aggravated by the land – holding policy of the colonial regime which was centred on cash crop production and state ownership thereby depriving rural peasants of their livelihood.⁶⁸ Consequently, the attendant rural poverty witnessed the influx of migrants to the port cities in search of greener pastures (Table 1).

Table 1. Population Growth in Colonial Lagos

Year	Population
1866	25,083
1891	32,508
1901	38,387
1911	73,766
1921	99,700
1931	126,000
1953	230,250
1960	665,246

Source: L. Fourchad, 'Lagos and the invention of Juvenile Delinquency', 117.⁶⁹

This rural-urban migration was facilitated by the improved transportation network (sea, road and railway) in British West Africa. The colonial transport system was aimed at the conveying of raw materials from the interior to the coast, as well as distribution of imported commodities to the interior. A major move in this direction was the construction of the Carter Bridge between 1896 and 1901 linking Lagos to other parts of the Yoruba country by road.⁷⁰ By 1895, the construction of the Lagos railway kick started with the ‘objective of opening up the Yoruba interior to British commerce’.⁷¹ The commissioning of Lagos-Ibadan section of the terminal in 1901 and by extension to Kano in 1912 encouraged massive influx of economic migrants from diverse locations in the hinterland to the colonial capital – Lagos.⁷² This encouraged an unplanned rapid rural-urban migration which changed the socio-spatial pattern of the region with serious environmental and medical implications.

After the official index case of 28th July, 1924, local reactions in the affected areas include fear and panic. Some residents of Oko Awo speedily sought refuge with their relatives in other parts of the town.⁷³ Subsequent cases of Bubonic Plague were recorded from the 22nd of August 1924. Shortly after this scenario, the disease was transmitted to other parts of the town which are mainly areas of native settlements such as Oke Sunna and Sand-grouse.⁷⁴ A new case of Bubonic Plague was diagnosed Post-Mortem in Lagos on the 22nd of August, 1924. This was a case of a woman whose death was uncertified and at the usual routine post mortem examination, smears taken from a groin gland showed the bacilli of Plague. The case has occurred inside the infected area.⁷⁵ On 25 August, 1924, two additional cases were diagnosed. These were cases of two women from Olowu street in the Epetedo district and Docemo Street respectively.⁷⁶ Considering the growing cases of

the epidemic in Lagos, the Director of medical and Sanitary Services advised the Chief Secretary to the Government that the Port of Lagos and by extension, the westward of the McGregor Canal and Five Cowrie Creek, also Iddo Island be declared infected.⁷⁷ In sum, by 28 August 1924, six fresh cases had occurred: (a) Asimowu, a female who died in the infected area on the 22nd August 1924 diagnosed post-mortem; (b) Aisatu, a female who died about a mile from the infected area on the 22nd August 1924, she was diagnosed post-mortem – a neighbour to Hausa traders connected with the infected area; (c) Sariyu, a female was one of the contacts isolated from an infected house and became ill the day after isolation; (d) A female found dead in the street on the northern edge of the infected on the morning of the 25 of August 1924 and diagnosed post-mortem; (e) Davies, a male who came for treatment at the Lagos Hospital on 26 August 1924, was found to be suffering from Plague and was immediately removed to the Infectious Diseases Hospital where he died on the 28 of August 1924; (f) A male residing outside the infected area died on the 27 August 1924 and was diagnosed post-mortem. Thus, by the 26 August 1924, amidst rising cases of Plague morbidity and mortality, the port of Lagos was declared infected and the whole of Lagos Island from the Macgregor Canal westward and also Iddo Island.⁷⁸ Indeed, by the 9th September, 1924, twenty cases had been recorded, all fatal.⁷⁹

The total number of Plague cases diagnosed from the 22 August to 23 September 1924 is sixty seven of which sixty six were fatal. Forty eight cases were diagnosed post-mortem at the public mortuary and nineteen at the infectious disease hospital. While sixty of the cases were adults, the remaining seven were children and adolescence - a total of forty-one male and twenty six female victims.⁸⁰ By 4 October, 1924, the Deputy Director of Sanitary Service, Lagos ‘admits that Plague has now infected considerable section of [Lagos] so far as one can judge by human cases’.⁸¹ In Lagos, between 22 August and 22 October, 1924, two hundred and fifty five cases of Plague infection were recorded with

two hundred and ten deaths, twenty one recoveries and twenty four under clinical observation.⁸² By the 6 of November, 1924, the morbidity and mortality rate emanating from the Bubonic Plague epidemic increased from a total of three hundred and thirty three cases, with two hundred and eighty deaths, forty two recoveries and twelve under hospital observation.⁸³ By 31 December 1924, four hundred and fourteen cases were reported with three hundred and forty three fatalities. The epidemic outbreak in July, rose to its height in October, when over forty cases were reported every week, only to subside in November and December with a record of two to three cases per week.⁸⁴ A total number of one hundred and four cases with eighty eight deaths were reported in 1925.⁸⁵ In 1926, four hundred and ninety seven people were infected with four hundred and seventy six fatalities. The official Plague morbidity slowed down in 1927 with a total of 155 infections and 151 deaths. The year 1928 was a boom year of Plague transmission with a total of 519 cases and 509 fatalities. Among the 188 people diagnosed with Plague in 1929, a total of 176 died. The year 1930 marked a sudden fall in the number of infections, however, all the 65 victims died. The death of the 5 people infected in 1931 witnessed a halt to Plague transmission in colonial Lagos.⁸⁶

As the Plague infection spreads on Lagos Island, the colonial government under section 2 of the Quarantine Ordinance (Chapter 54) of 1925 declared the Port of Lagos, Lagos Island, and Iddo Island as infected places.⁸⁷ To this end, the colonial authority implemented quarantine and sanitary measures involving the isolation of the infected people at the infectious disease hospital where the majority died. However, the rumours of the inhuman conditions in the quarantine camp as well as the reality of the mortality level recorded, made several people infected with Plague to flee to the mainland. This occurred amidst anti-Plague road block and military check point at the Denton Bridge. Thus, the spread of Plague epidemic out of the Lagos Island to the Mainland can be traced to the

often desperate attempt by Plague victims to evade quarantine measures. This particularly proved to be the case in the outbreak of the epidemic in Agege, Yaba, and Ikeja. Indeed, the outbreak of the epidemic in Agege had been traced to Lorries smuggling Plague victims from Lagos Island to Agege. According to colonial report, Lorries came out from Lagos Island with sick men on board. On one occasion, a lorry stopped at Agege and the sick man was dumped off.⁸⁸ This is the case of a man named Adedoyin, who was brought out of Lagos on a lorry to Agege on Friday evening on the 13 September 1929. He was sick and taken to the house of a gold smith named Emmanuel Ladega in Agege where he and his brother remained for the night. Adedoyin's corpse was later discovered on the street in the morning of 14 September, 1929. A post-mortem examination of the corpse indicated Plague as the cause of death.⁸⁹ Similarly, two deceased persons - Jinadu and Ishola who lived at 94, upper Anikantamo Square Lagos, were dumped off in Agege. This is a case of quarantine evasion and corpse smuggling out of Lagos Island.⁹⁰ On the 7 November 1929, a dead body of a man named Babatunde was found lying in the road at Agege. Medical examination on the corpse indicated Plague as the cause of death. Investigations reveal that the deceased was smuggled out of Lagos by his brother named Yaya.⁹¹

By 8 November, 1929, the proliferation of Plague victims from Lagos Island to the mainland was on a rise. These were cases of corpses dumped on the roadside between Yaba and Ikeja. In a survey carried out between 19 August and 8 November 1929, the Assistant District Officer, Lagos District observed not less than eleven corpses either lying by the roadside or dumped in the bush. Some of the corpses were certified to have died of Bubonic Plague. According to the colonial report:

On the 7th instant, I found one body of a man lying in the main road Agege, also the body of a woman lying on the roadside at

mile 12 ½. On my return to the station, I found a woman lying in the market just opposite this office. This woman was dying, and I could get no information from her. I sent her to Ebute-Metta together with the other dead. I would point out that most of these people have been nearly all cases brought out from Lagos, and dumped on the road.⁹²

Plague morbidity and mortality in Lagos as illustrated in Table 2 below shows that the outbreak began to assume epidemic proportions in September 1924 reached its maximum in October and declined rapidly in December of the same. The official colonial records shows fewer outbreaks thereafter from January until July 1925 when a slight recrudescence took place followed by more persistent wave commencing in September and continuing thereafter.⁹³ As noted in Sir Edward Thornton's Report on Plague in Nigeria, 'it is agreed by everyone that the recorded cases in Lagos do not by any means represent all that have occurred and that many cases have been concealed and even removed so that the inhabitants of the infected dwellings should escape the measures of disinfection and isolation considered necessary by the authorities'.⁹⁴

The official figures in Table 2 show that Plague was already epizootic in the rats in Lagos by 25 August 1924. The progression of the epidemic among rats in the port city was marked by a corresponding disease incidence in the human population.⁹⁵ This assertion is supported by the figures of the fortnight ended 11 September 1924 which shows 21 cases and 18 deaths among Lagosians as well as 791 rats examined with 0.5% infected. An increased morbidity of Plague by 25 September 1924 with 62 cases and 53 deaths was in tandem with an increased incidence of the disease in rats at 3.0%. Increased number of Plague infection in rats (4.8%) in the fortnight ended 9 October 1924 was marked by a progression of morbidity and mortality levels in the human population (90 cases and 79 deaths). Furthermore, the decline of the infection in rats witnessed a degeneration of

human cases and deaths from the fortnight ended 23 October 1924 (3.5% infected rats, 85 human cases and 66 deaths). Subsequently, the fortnight ended 6 November 1924 documented 2.4% infected rats, 80 human cases and 69 deaths; 20 November 1924 (2.0% infected rats, 40 human cases and 27 deaths); 4 December 1924 (1.5% infected rats, 20 human cases and 16 deaths); 18 December 1924 (0.7% infected rats, 7 human cases and 7 deaths) and 31 December 1924 (0.4% infected rats, 2 human cases and 1 death). These figures are supported by the incidences of rat Plague from 1925 to 1929 as presented in Table 3.

Table 2: Cases of and deaths from Plague in Lagos fortnightly and the percentage of infected rodents in 1924

Fortnight ended	Cases	Deaths	Rats examined	Infected Rats in %
1 -15 July	Several informal cases			
31 July	1	1	-	-
14 August	0	0	-	-
25 August	6	6	-	4.4
11 September	21	18	791	0.5
25 September	62	53	1322	3.0
9 October	90	79	1659	4.8
23 October	85	66	4053	3.5
6 November	80	69	5007	2.4
20 November	40	27	3250	2.0
4 December	20	16	2301	1.5
18 December	7	7	4258	0.7
31 December	2	1	3850	0.4
Total	414	343		

Source: NAI. CSO 26/2. 17222. Vol I. 'Sir Edward Thornton's Report on Plague in Nigeria'. From E.Thornton to the Chief Secretary to the Government, Lagos, 12th July, 1926, p. 18.

Table 3 shows the implication of rat Plague on population health in Lagos from 1925 to 1929 based on official estimates. A comparative analysis of the official estimates of Plague in rats and the human population suggests a zoonotic transmission chain and reservoir that sustained *Yersinia pestis* in colonial Lagos (see Table 2 and Table 3). For instance, in 1925, the number of infected rats caught in Lagos is 273. In the same year, Lagos witnessed 104 official cases of Plague with 88 deaths among humans. The Plague morbidity-mortality figures sky-rocketed in 1926 in tandem with the high frequency of the disease in rats. During the year, 1,020 infected rats were caught, 497 Lagosians were infected with Plague and 476 died of the disease. A declined incidence of rat Plague with 676 infected rats witnessed a downward slope of the outbreak in humans in 1927 (155 cases and 151 deaths). The year 1928 marked the peak of the outbreak in which 519 Lagosians were infected and 509 died of Plague. The same year (1928) marked the peak of the outbreak in rats with 1,214 infected rats caught. In 1929, a downward slope in Plague morbidity (188 cases) and mortality (176 deaths) among Lagosians witnessed a low prevalence of rat Plague with 430 infected rats.⁹⁶

Table 3: Official Estimates of Rat Plague in Lagos, 1925-1929

Year	No. of Rats infected with Plague
1925	273
1926	1,020
1927	676
1928	1,214
1929	430

Source: Annual Report, Medical Research Institute, Lagos, 'Rat Plague', 1929, p. 6

These figures show that Plague endured in colonial Lagos through animal reservoirs of which rats were major culprits. In essence, after the initial transborder

transmission of the disease from Kumasi (Gold Coast) to Lagos (Nigeria), the Plague bacilli sought a reservoir in rats which sustained the epidemic. Socio-spatial inequality characterised by the poor living conditions of native Lagosians necessitated the spread of the disease through exposure to infected rats in the most insanitary areas such as Oko Awo. Thus, the de-ratting operation was fundamental in the control of the epidemic. The official statistics shows that 1,947 total cases of Plague occurred in Lagos between 1924 and 1931 (Table 4).

Table 4. Plague Morbidity in Lagos, 1924-1931

Year	Cases
1924	414
1925	104
1926	497
1927	155
1928	519
1929	188
1930	65
1931	5
Total	1947

Source: NAI. Annual Medical and Sanitary Report, Nigeria, (1931), 27; Colonial Report No. 1710, 'Annual Report on the Social and Economic Progress of the People of Nigeria', (1934), 21.

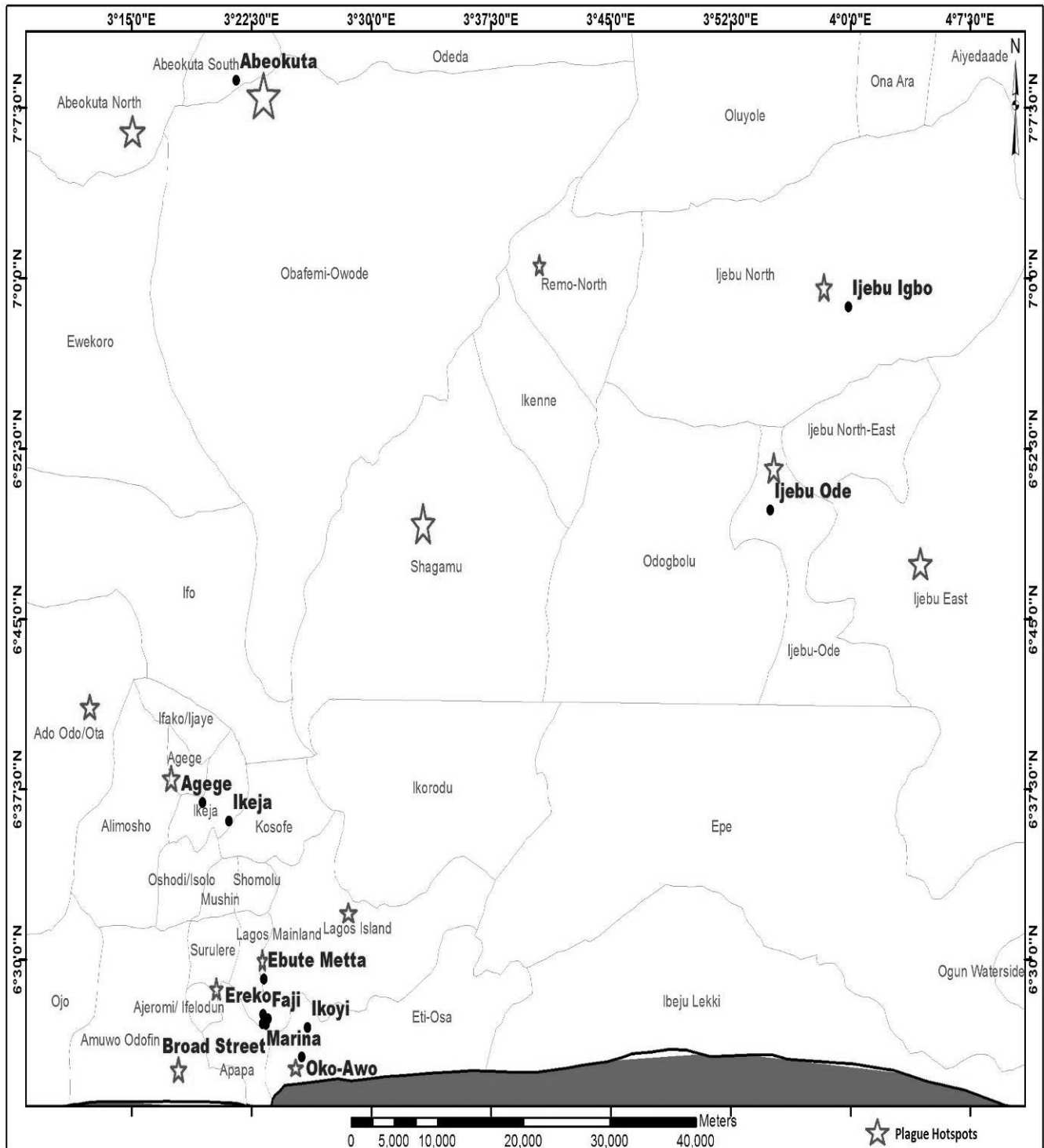
The most affected areas in Lagos were the quarters inhabited by African population (Figure 2).⁹⁷ These are areas lacking basic amenities and infrastructure. Infact, the hotspot of the outbreak, Oko-Awo, bring to the fore, the central place of the colonial segregation policies and urban-environmental health on the epidemic outbreak. Indeed, population distribution in the city prior to the Bubonic Plague outbreak indicates a clear

line of spatial segregation between the European settlers and natives.⁹⁸ Lagos developed in the colonial era as a multi-ethnic and multicultural society based originally on the Island from where it bifurcated into four distinct communities. The European migrants lived on the Marina and the race course.⁹⁹ Isale Eko was the traditional base of the king of Lagos and its indigenes – the Awori. The Brazilian repatriates lived at Popo Aguda, the Sierra Leonean migrants at Saro town, migrants from Ivory Coast, Liberia, Togo, Gold Coast (Ghana) and Dahomey (Republic of Benin) were based in Araromi and Lafiagi, the hinterland migrants from Oyo, Ogbomoso, Ilorin, Ilesha, resided at Oke Popo, Oko Awo and Oke Aarin.¹⁰⁰ Steady immigration due to the desire to live close to the centre of economic activities led to overcrowding on Lagos Island. Amidst Eurocentric urban planning that made no provision for population growth of the native, the African immigrants resorted to self-help. This is obvious in the sprawling of settlements in waterlogged and damp uninhabitable quarters such as Oko-Awo, Elegbata, Alakoro, and Anikantamo.¹⁰¹ Lacking sewerage and quality housing, the non-European quarters became habitats for the Plague carrying rodent – the black rat, thereby leading to an endurance of Bubonic Plague in the city.

Furthermore, an important environmental determinant of Plague morbidity is climatic conditions and its effects on the vector-rodent (flea-rat) population. It has been scientifically proven that the Plague bacilli flourish best in a temperature range of about 15 to 27 degrees centigrade.¹⁰² Thus, a favourable breeding climatic condition will encourage the spread and transmission of Plague, especially when the disease is already epizootic among rat population in the infected area. In essence, severe heat and drought or highly temperate weather will shorten the life circle of the disease vector (fleas) by forcing it to hibernate thereby arresting the epidemic in the interim.¹⁰³ In illustrating the culpability of weather in the spread of Plague in colonial Lagos, the atmospheric mean temperature of

the port city in 1923 is 27.2 degree centigrade, in 1924 (27.4), 1925 (26.5), 1927 (26.8), 1928 (26.9), 1929 (26.6), 1930 (27.2), 1931 (27.5) and in 1932 (26.7).¹⁰⁴ In the final analysis, the climatic variances show a humid atmospheric condition conducive for Plague reproduction.¹⁰⁵ Indeed, it has been observed that occurrence of Plague in Lagos from 1924 to 1931 was predominant in the month of October due to favourable climatic conditions.¹⁰⁶

Figure 2: A map showing Plague hotspots in Lagos and environs, 1924-1931



Source: Field Survey

3.4 Pattern of Plague Diffusion to Lagos Environs

Plague was transmitted essentially through transportation routes to the towns and villages in Lagos environs. Indeed, trade relations and migration between Lagos and its Ijebu and Egba neighbours are rooted in antiquity. For example, in the pre-colonial era, trade link between Lagos and the hinterland was facilitated through the Ijebu and Egba territories by way of the Osun, Ooni and Ogun rivers. While the British trading activities were initially confined to the coast in the early colonial era, the need to penetrate the interior in order to promote the British trading interests necessitated the establishment of mechanized road and railway transportation linking Lagos with the hinterland through the Ijebu and Egba corridors by the first quarter of the twentieth century.¹⁰⁷ The steady traffic of commuters, traders and commodities between Lagos and its environs necessitated the spread of the infection to neighbouring town of Abeokuta by October 1924. On the 31 October 1924, two suspected cases of Plague were notified by the Medical Officer at Abeokuta. Abeokuta was 60 miles and 3 hours by rail from Lagos. Dr. Clark, the Assistant Director of Sanitary Service proceeded to Abeokuta the same day to investigate the cases of which only one was certified to be Plague. This was a case of Plague imported from Lagos.¹⁰⁸ It subsequently spread in the town and transmission to other areas such as the Ijebu towns and villages in 1925.¹⁰⁹

An outbreak of over 500 cases was reported from Ijebu Ode Province about thirty miles east of the Lagos railway network in August 1925.¹¹⁰ By November 1925, another outbreak accounting for 44 deaths occurred in Abeokuta.¹¹¹ The original outbreak in Ijebu Ode occurred in the Remo District in 1925 and ceased by the end of the year only to reappear in March 1926 and spread to neighbouring settlements of Oru, Ago, Ijebu Igbo,

Idowa and Ososa.¹¹² A fresh outbreak involving 9 cases of Plague occurred in Abeokuta in 1926.¹¹³

By the end of 1926, there were indications that Plague infection in rats was spreading towards Abeokuta. Ultimately, infected rats were found in Lagos environs. For instance, following the report that Plague was already epizootic among rats in Abeokuta town and an outbreak in the human population occurred in the Southern part of the province. Table 5 below shows Plague cases and deaths fortnightly in Lagos environs between 1925 and 1926. A special attention of the colonial government was directed towards this emerging trend in Plague morbidity with a focus on stopping the epidemic spread to densely populated neighbouring settlements such as Ibadan. As observed by the colonial officials:

Plague continues to spread in the villages along the road between Ijebu Ode and Ibadan...The village of Ago about twelve miles north of Ijebu Ode town has been the scene of a considerable outbreak and action has had to be taken to restrict the traffic towards Ibadan and administrative action has been taken for this purpose...The anti-Plague staff is being increased as opportunity permits and preventive action is being taken in both Ibadan and Abeokuta...The sanitary condition of the infected villages is very bad and the main preventive measures are of a cleansing nature.¹¹⁴

Table 5: Plague Cases and Deaths fortnightly in Lagos Environs between 1925 and 1926

	Ogere		Ishara		Ilishan		Iperu		Ilara		Shagamu		Odo		Ijebu-Ode	
Population	1,953		2,592		1,563		6,069		1,170		12,000		1,916		23,000	
Fortnight ending	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
25/8/1925	55	42														
1/9/1925	80	65	3	3	12	12	1	1								
15/9/1925	68	32	18	9	23	17	0	0								
29/9/1925	40	25	17	14	25	21	0	0								
13/10/1925	89	84	22	19	16	15	7	4								
27/10/1925	18	11	9	7	12	6	21	11								
10/11/1925	7	3	5	3	10	11	9	11								
24/11/1925	3	2	4	3	1	1	8	5								
8/12/1925	2	0	0	0	2	1	0	0								
9/1/1926	1	0	0	0	2	1	0	0								
23/1/1926	0	0	0	0	0	0	0	0	4	1						
6/2/1926	0	0	0	0	0	0	0	0	1	1						
20/2/1926	0	0	0	0	0	0	0	0	0	0						
6/3/1926	0	0	0	0	0	0	0	0	0	0	2	1	4			
20/3/1926	0	0	0	0	0	0	1	0	0	0	5	4	8	5	1	1
3/4/1926	0	0	0	0	0	0	2	0	0	0	4	1	6	5	10	10
17/4/1926	0	0	0	0	0	0	0	0	0	0	0	0	5	3	6	6
1/5/1926	0	0	0	0	0	2	2	0	0	0	0	0	2	2	7	6
15/5/1926	0	0	0	0	0	4	4	0	0	0	0	0	5	6	3	3
29/5/1926	0	0	0	0	0	0	3	0	0	0	0	0	1	1	5	5
19/6/1926	0	0	0	0	0	0	3	0	0	0	0	0	1	1	23	21
26/6/1926	1	0	0	0	0	0	0	0	0	0	0	0	1	0	10	10
Total	300	206	69	58	105	85	54	17	5	2	11	6	29	23	66	62

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CHAPTER FOUR

COLONIAL INTERVENTIONS AND LOCAL RESPONSES, 1924-1959

4.1 Transborder Disease Surveillance

International Sanitary Regulations (ISRs) refer to sanitary measures and procedures during travel that is aimed at preventing the spread of infectious diseases across state borders. Until the promulgation of the ISRs of 1951, there was no uniform internationally sanctioned health regulation in the area of transborder surveillance and screening of infectious disease carriers in ports. Thus, the 1951 promulgation focused on six major infectious diseases of the era - Plague, cholera, yellow fever, smallpox, typhus, and relapsing fever.¹ In essence, prior to and during the outbreak of Bubonic Plague in Lagos, transborder surveillance and screening of potential individuals and commodities that could constitute a public health risk was conducted solely through distinct state regulations. Public health regulations in colonial Lagos were based on the practices adopted in the British Empire. This is a fire brigade approach of partial transborder surveillance and screening of travellers in ports during an epidemic outbreak. Other measures may include quarantining, sanitary, and evacuation procedures as deemed necessary based on the issuance of a public health ordinance.² This procedure was often discontinued whenever the epidemic wave subsides. Indeed, in the Lagos scenario, this is a case of Plague transmitted through the port of Coomasie (Gold Coast/ Ghana) to Lagos during a period when the 'Gold Coast ports were out of quarantine'.³

In 1924, the outbreak of Plague on the Gold Coast led to public health policies that focused on the application of rat guards and tars to all mooring ropes. This is the case due to the peculiar pattern of Plague transmission that was predominant in the maritime trade. However, destruction of rats on vessels arriving at Lagos from Gold Coast Ports was not

put into cognizance. Considering this lackadaisical approach to transborder disease control, the infection was inevitably introduced to Lagos by infected fleas in clothing by some of the Hausa Kola nut traders during the period of 5th May to 17th June 1924 when quarantine against the Gold Coast ports was raised.⁴ The outbreak of Plague in Lagos led to the institution of some transborder surveillance and screening measures. These measures were designed to contain further transmission of Plague and other infectious diseases to Lagos. To this end, passengers arriving in Lagos from Sekondi were landed at the quarantine station and their clothing and bedding disinfected with Clayton gas.⁵ Boxes with clothing were disinfected with few ounces of formalin. While rat guards and tar were applied to the mooring ropes of all vessels from Gold Coast ports, it was not considered necessary to fumigate these ships.⁶ In Lagos, all ships coming alongside the wharves affix rat guards, tar their cables, white wash their gangways and have them lighted at night. The loading of cargo was scheduled to take place in daylight only between 7a.m and 5 pm.⁷ These measures were considered necessary to prevent sanitary and screening evasion at the port.

In implementing transborder surveillance and screening, an inspection and disinfection station was constructed within the customs enclosure. The routine disinfection of clothing and baggage of large numbers of passengers was carried out in this building with little delay. This exercise was to continue until Plague in the Gold Coast subsides.⁸ Security agents were deployed to prevent persons boarding or leaving ships without a pass from the Port Health Officer.⁹ All passengers travelling overseas are medically examined before embarkation and their clothing and baggage disinfected when this is considered necessary. By September, 1924, third class passengers and their baggage pass through the disinfecting station on the Wharf; personal disinfection took place at one side of the building and of baggage on the other. After disinfection and inspection, passengers and their baggage are immediately embarked. The materials used for disinfection are clayton

gas, formalin and a 20% kerosene emulsion. Anti-Plague inoculations are also carried out but not in every case.¹⁰ The so called ‘Third Class passengers’ are largely African natives who are suspiciously categorized as Plague carriers. Hence, the transborder disease screening regulation was amended to focus mainly on Africans. While the European first class passengers are disembarked without baggage disinfection Africans are subjected to the process. This pattern of transborder surveillance, screening and disinfestation continued throughout the outbreak from 1924 to 1931 with increased powers given to the Port Health Officers under the quarantine regulations of 1925 and the Quarantine Ordinance of 1926, to carry out preventive measures in the Port ‘whether the port was actually declared to be in quarantine or not’.¹¹ This trend of disease surveillance and prevention ensured that Plague was not exported from Nigeria to other countries. However, considering the existence of the epidemic elsewhere in the world, the transborder screening and surveillance continued at the end of the outbreak in 1931. This measure was taken to avert a recrudescence of another outbreak through transborder maritime network which was the predominant means transportation in the colonial era. This reality was observed by the Port Health Service in 1935 as follows:

Following the trade recovery at the end of 1934, the shipping entering the port of Lagos during 1935 showed a large increase. This increase was especially noticeable during the last two quarters of the year. The usual medical examination of incoming and outgoing passengers, vaccination, and disinfestation were continued during the year and no case of imported or exported infectious disease was recorded.¹²

4.2 Quarantine Measures

Following the outbreak of Bubonic Plague in Lagos, the colonial government instituted quarantine measures and movement restrictions in the affected areas. For

instance, by 30th July 1924, fourteen persons who were contacts of the index case were removed to the infectious disease hospital for observation. An infected area was declared and the blocks of building in which the case occurred were surrounded by a corrugated iron fence sunk into the street. By this time, about 2000 feet of fencing had been sunk 2feet 6 inches in the ground. All the people residing around the infected houses were examined - two sick and thirty three contacts were quarantined at the Infectious Disease Hospital.¹³ The Public Work Department was authorized to construct bush houses in the infectious disease hospital compound as a temporary accommodation for the swelling contacts of Plague victims. Temporary sanitary inspectors were employed to relief the stressed experienced officers working in the affected areas.¹⁴ By the 31st July, 1924, a total of 73 contacts were under quarantine observation at the Infectious Disease Hospital.¹⁵

Having created a platform for transborder surveillance and screening of incoming passengers and cargo, it became expedient to prevent the transmission of Plague from Lagos to other locations within and outside Nigeria. To this end, a camp was arranged in which all passengers who desire to leave the infected area may be kept under observation for five days before departure. While the inoculation of all passengers was impossible due to inadequate vaccine, inspection of the passengers immediately before embarkation as well as disinfection of their baggage was carried out. Boarding procedure necessitated all passengers and their baggage's to leave from the Customs Wharf. Each was given Embarkation pass to be delivered up to a police officer stationed on the steamer gangway to prevent persons boarding or leaving ships without a pass from the Port Health Officer.¹⁶

In the interior part of the city, canoes were used as efficient police water patrol system. Arrival and departures of all canoes was daylight at designated canoe packs. Passengers on canoes arriving with produce or foodstuffs were counted and all provided

with a Blue pass valid for boarding the canoe again and allow them to pass any police patrol boat. Returning passengers were allowed to take with them only articles unlikely to be infected, for example, new pieces of cloth.¹⁷ A list of fishermen was made and each provided with a permanent 'Red' pass. Fishing boats were compelled to land their fish at 5 cowrie Creek Bridge and no passengers nor baggages are allowed on fishing canoes. European and African personal servants entering the infected area were provided with a pass. These passes were to be in the care of their masters who gave them and collected it on daily basis and report at once if lost. All servants entered the infected area by a definite route – Apapa to Lagos by ferry. Labourers to and from Apapa, Ebute Metta and the Nigerian Dry Dock were checked by their tallies. Police road patrols was instituted along the Macgregor Canal and at Ikoyi Road Bridge, Onikan Bridge and 5-Cowrie Creek bridge with road blocks erected as necessary.¹⁸ Persons transporting market produce were allowed to pass by these bridges with a temporary 'blue' pass covering a return the same day in daylight. Passes for other authorized persons Europeans and Africans were issued on application. Vehicles from the affected areas were prohibited from passing the Denton Bridge without a special permit. The implementation of these measures as applicable to the natives was perceived to be driven by racial prejudices as the native commuters were often sprayed indiscriminately with disinfectants.¹⁹

Local responses to the quarantine measures was obvious in the interpretation of movement restrictions by Lagosians. A local observer noted that this colonial measure implies forceful incarceration and hunger strike. According to this commentator: '*Awon Dokita Ijoba bere si se ajo nipa isedale ti ilu won nipa pe ki nwon ma fi agbara ati ipa Ijoba so adugbo kan di Eleha apapandodo, ti nwon npe ni Quarantine eyiti emi le peni Iko- iyan tabi Ifi-ebi nla pa Ara-ilu*'.²⁰ This circumstance was later indicted for obstruction to trade flows between Lagos and the hinterland.²¹ Similarly, quarantine measures in India

and South Africa during the Third Plague Pandemic witnessed a related system of racial stigmatization of the natives while Europeans were given preferred treatments at disease screening sites like railway and road transport stations.²² The inhuman enforcement of the quarantine operations were greeted with general fear among the natives. As observers during the outbreak puts it, *‘ifoia pupo ni o mbe larin awon enia nigbati nwon ba ngbo wipe Ijoba nmu awon alaisan; ihale pelu ifeju ti awon osise bi Wolewole miran tile nlo je eyiti o nda aiya ja awon enia loto’*.²³

On the event of death, unnecessary attendance at funerals was prohibited by the colonial government and only few close friends and families were permitted to go to the cemetery. Whereas autopsies were carried out on the dead in general, the approach adopted took no cognisance of local tradition. This scenario was reported in the Yoruba newspaper, *Eletí-Ofe* of 17 September 1924 under the heading *‘Kini yi Nkan Agbagba, O nkan Are’* as follows:

Bi akoko kan ba wa ti o ye ki adura yi ki o ka ni l’ara, asiko yi li o ye ki o ri be: o ye ki a fi tokantokan gba a, nitoripe ominu nko ni bi a ti nwoye; ki ise ominu nipa ti aisan yi, nitoripe awa ni igbagbo wipe, Olorun Alanu yio dawo re duro. Ewo ni ominu ti o nko ni? Iyen nit i wipe, oku ti oba sa ti ku sa, ki o di gbigbe; ki se gbigbe ti “gege l’a o gbe e,” bikose ti gbigbe oni-riyeriye, o di Mortuary fun bibewo, boya fun lila lati mo kini o pa a, (l’ehin ti Iku bat i fi doje re kan a tan!). Saturday ijarun ko dun nigbati a gbo ti iku Ogboni wa, Oloye Olorogun, ti o pa ipo da. Nigbati iro ofo nla yi ka ilu, ohun ti a ngbo l’otun l’osi li enu awon ti o ndaro re ni wipe, “nje nwon ko sa ni gbe e bayi o”? Ko de pe ju lehin na, awon “elegiri” ti de, afara ko si, nwon ti bere gbe e, awon ibiga ti di kiko, adugbo ibe ti di “otutugburutu, bi o ko lo ki o yago fun mi l’ona”. A si gbo wipe oku yi ko pad abo was i Iga na mo titi a fi nko iwe yi l’oni yi...Eyi ara! “Ori Oye ki sun ‘egi,” (iyen ni wipe, eniti o ba ti je oye, a kin sin oku re si ode) ni a ma ti ngbo ri ke o!...Oku Ogboni sun ni Ikoyi...Nje oro na ko ndi oro wipe, a nki i, a nlo o, a ni a koi mo eniti o ku. Beni agbagba wa ni ile yi, titi aiye fi ndori kodo bayi, ti a npe asa ti a ti ba li aiye run... Ni ibi gbogbo ni a nko adie ale. Ko si ilu ti ko ni asa lati ma b’owo fun oku awon enia nla won, awon Onipo won, awon Olola won, awon Oloye won. Awon ti o to ki a sin si Westminster Abbey, nwon ko je lo sin won sibi kan sakala kan sa. Awon Oba won ni lati

*sun l'egbe awon Baba-nla won, awon Oloye won ni lati dubule, ti awon asiwaju won – Itan niyen, asa niyen, isedale niyen, “bi a tin se ni Ake, beni nwon nse no Oke;” sugbon loni, Oloye Olorogun ko sun li egbe awon Baba-nla re!.*²⁴

The commentator observed with grave concern the manner in which the colonial authorities handled the dead during the Plague outbreak in Lagos. A narrative in which the sanitary inspectors whisked away the dead body of an *Ogboni* Chief named ‘Olorogun’ (probably for the purpose of autopsy) without allowing for traditional funeral right accorded important personalities in Yoruba land was articulated. This precarious scenario was seen as a deliberate attempt to undermine local cultural practices – an approach contrary to the practice in England where important personalities were buried at Westminster Abbey. This circumstance built up tensions between the colonialists and the colonised in Lagos.

In the area of railway transportation, all passengers from the infected area were compelled to leave from the Iddo station after inspection and disinfection of their baggages. These categories of passengers were provided with a special ‘yellow’ pass. Railway carriages and offices were disinfected.²⁵ Road barricades were constructed to screen migrants coming to and fro the hinterland and the Island. One of these barricades situated in Yaba was declared ineffective in 1929, as infected persons and corpses were successfully smuggled through them to the mainland in Ikeja and Agege districts. According to the Assistant District Officer, Lagos, in 8th November, 1929, ‘the barrier at Yaba is useless so far as an anti-Plague measure is concerned. I have only once been stopped at the barrier at night time, and it is perfectly easy for any car to get past without been examined’.²⁶ The public health approach of the colonial government, especially as it relates to quarantine measures and movement restrictions sent jitters to the local population. This is specifically so in the high rate of mortality recorded among

quarantined victims of Plague. For example, on the 25th August, 1924 a case was sent to the Infectious Disease Hospital and died the following day. His address could not be ascertained. On the 24th August, one of the 179 contacts under observation developed Plague and died on the 29th.²⁷ Indeed, the total numbers of cases diagnosed up to 10 September, 1924 were 20 and all ended fatally. All the cases were adults – 11 males and 9 females. The Infectious disease hospital seems to have become a place of no return as Plague victims on admission died in droves during the outbreak from 1924-1931.²⁸ Hence, families began to hide their sick. Information was now difficult or impossible to get, the sick were concealed and when a death occurred, many of the contacts ran away and could not be found.²⁹ The colonial officials lamented that ‘house to house inspection is difficult on account of the warren-like nature of this part of the town and the ease with which the sick can be moved about so as to avoid discovery’.³⁰ This was seen as a ‘lack of cooperation on the part of the people’.³¹

In redressing this trend of public irritation to anti-Plague measures, the colonial government reviewed the existing protocol. In essence, it was decided that while the sick are isolated at the infectious disease hospital, contacts removed from infected houses should be provided with accommodation until their own dwellings are certified as fit for habitation.³² This scenario ultimately influenced the establishment of temporary isolation camp of rat proofed hut-accommodation in Ebute Metta where occupants of infected houses are placed under observation.³³ At this point, a medium term scheme in which the evacuation of natives from congested insanitary and infected areas to a proposed layout at Yaba was in the pipeline.³⁴ Whereas, the Yaba housing scheme could not be implemented in the interim, these quarantine measures and movement restrictions continued throughout the outbreak from 1924 to 1931, and were extended to neighbouring towns of Ijebu and Abeokuta provinces.³⁵

4.3 Environmental Sanitation

The colonial government responded to the outbreak by introducing sanitary measures including the inspection of 205 houses, fumigation of 28 houses, 1852 poison baits as well as 115 rat traps were completed by 31st July, 1924.³⁶ All houses in the area were fumigated with sulphur. After fumigation, spraying with a mixture of tar oil and kerosene was done.³⁷ The disinfestation of infected houses and the quarantining of their inhabitants were carried out amidst challenges of compensation for alleged stolen properties during sanitary operations.³⁸ The bodies of all dead in the infected area were examined post-mortem and similar action was taken in the case of all sudden deaths or deaths which seemed otherwise suspicious in other parts of Lagos.³⁹ The Plague outbreak occurred amidst an unprecedented influx of diverse races and heterogeneous ethnic groups into Lagos – Europeans, Lebanese, Hausa, Igbo, Saro, Nago, and Lucumi. Indeed, the index case had been traced to a group of Hausa traders in Lagos who were actively involved in cross-border kola nut trade with Kumasi, Ghana.

The breakdown of traditional values and culture of communal living and sanitation of an essentially Yoruba society undermines urban-environmental health in colonial Lagos. Indeed, sanitation has been projected in the literature as an invention of Europe in an African unhygienic society bedevilled with epidemics of its own making. Contrarily, historical evidence suggests otherwise. Sanitation was not new to Africa in the colonial era. For instance, the pre-colonial Yoruba culture emphasizes the importance of personal and public hygiene as well as environmental sanitation. This is boldly stamped in the various sociocultural traditions and built environment of the people. This is stipulated in the *Ifa* oracular literature (a primary source of Yoruba history). The part of the *Ifa* oracular

chant dealing with the nexus between personal hygiene and sickness is the sixteenth chapter known as *Orangun Meji* and its seventh verse.⁴⁰ According to this ancient oral tradition:

*A ki i f'iti ju karun, A si maa f'itiju ko o; A dia fun
Afinju, Ti n lo yan obun lale. Eekana owo pente;
Pente pente isale. Bi a lobun lobinrin, A o lee jeru
mo; A dia fun Esu aiwe, Ti yoo mu obinrin sa lo,
Ni'ile Agbonmeregun. Nje, alade mo n we o,
Kuunsu, Alade mo n we o, Kuunsu.*⁴¹

Interpretatively, this Ifa verse discussed the linkage between poor hygiene/sanitation and disease outbreak. The Ifa divinity rebuked poor hygiene and affirmed the inevitable outbreak of diseases in an unsanitary environment. In its illustration, personal hygiene can be evaluated through the sanitary nature of the human fingernails, private parts, and the sequence of body bathing. This verse emphasized that dirty fingernails, un-kept private parts and unattended bodily care constitutes a bacteria reservoir and a potent basis for disease outbreak. It showcases the important place of women in maintaining proper hygiene and sanitation in homes and society in general. This is the case especially in traditional Yoruba society where women are involved in house chores as well as performing social functions such as – environmental sanitation (washing of plates and cloths, sweeping and mopping of surroundings), food preparation, as well as sexual activities.

A counterpoint to this pre-colonial social structure in Yoruba culture area of Nigeria is the colonial Eurocentric spatial order and its attendant migration of mainly menfolk from rural locations and from diverse ethnic backgrounds into the new rapidly urbanized areas such as Lagos which effectively altered the traditional demographic balance, cultural and socio-spatial make-up of the port city. For instance, rapid immigration into the city, in the first quarter of the twentieth century led to housing pressure, overcrowding, and poor

sanitation.⁴² Fourchard noted that ‘pressure in the hinterland, including colonial taxation and agricultural control policies, obliged farmers to migrate to cities, especially in coastal regions’.⁴³ Demographic imbalance in the face of labour migration characterized by predominantly male actors led to the growth of health risk behaviours – poor hygiene and prostitution which bred new forms of infectious diseases.⁴⁴ Indeed, labour migration dominated by men, distorted the Yoruba socio-cultural order. The consequent mother’s absence in homes impacted environmental sanitation, as this aspect of local shores is considered an exclusive domain of the African women. The aggregate impact of this phenomenon undermined public health in the port city. Thus, the removal of rubbish and disinfection of homes was paramount to the operations of the Sanitary Inspectors (Appendix D). The agility of the colonial officials in maintaining environmental health was perceived by Lagosians as invasive and capable of spreading the disease further. This perceptiveness of the colonial intervention in the area of refuse removal is captured thus:

*Gudugudu ni awon Wole-wole nru awon Aladugbo lona Epetedo lati enu ose meji wa, gbogbo pantiri, jatujatu eni ni nwon nko danu. Sugbon ewo ni ti ori-aja ni gigun lo wa ajakale-arun? Eru mba ni o, ogedegede germs ti elomiran ma lo fi imu ko lori aja onile ma le wu nkan miran sile. Eso ko di owo nyin baun?.*⁴⁵

Furthermore, the Lagosians perceived the environmental sanitation policy of the colonial government as hypocritical and discriminatory in the face of poor solid waste disposal littering the streets such as Egerton Road, Oke-arin Square, Ijaiye Street, and John Street in native areas. It was observed that whereas only major roads along Broad Street, Balogun Street and Victoria road are averagely good and free of solid waste dump, the infrastructure available in the European areas were far better. As put by an observer:

Lehin “Okò Awo” ati “Isalegangan” ti o di oro...e wo Elegbata ati Alakoro ti a ti nna ogidinleje owo si lati ojo yi wa, ti a ba mu awon ona ti o bo si Opopo-ode (main street) e wo egbe ile miran, ni oju ode won, ki e wo ira, ti o segede, eyi ha dara fun ilera bi...Laisi ani-ani, awon opopo ona “ye aje si;” sugbon awon eba ona nko? Bi iru awon ile ti o wan i Egerton Road, nibiti awon Alagbede kan nse ise, bi Oke-arin Square l’otun-l’osi, bi iru Ijaiye Street (l’okankan Ile No. 17) bi iru eba Shop Doherty ni John Street; awon wonyi ha dara fun Ilera bi?...E lo si ona Apatira Street, ti ijoba tin kun kin won to l’oyun omo miran, ki elo wo o. E lo wo Okepopo Street, e lo wo Molony Bridge Street (lati Idunmagbo) l’otun-l’osi lo ba ibiti Church wa; Iwonyi ha dara fun Ilera bi?... Be lehin ti awon yi wa bayi ni a nna owo ogidinleje, lati tun Victoria Road fe; awon ibiti nwon se dara niba tiwon (ti laisi ani-ani tiwon san ju awon ibiti a ka sile wonyi lo.). Bi awon nkan wonyi ba si wa sibe, kini ajo nyin yio ti jo l’oju awon enia ti e nwasu fun lati se ile ati ona won ki o ri finifini?.”⁴⁶

The nodes and hubs of transportation system in colonial Lagos became a theatre of sanitary war against the scourges of Plague. In this respect, the Denton Bridge was strategic in the prevention of Plague transmission to the mainland. The geostrategic importance of this bridge was articulated in a report of the Deputy Director of Sanitary Service, Lagos on 10th September, 1924 as follows:

This bridge joins Iddo Island to the mainland and a very great volume of traffic crosses. Motor cars average about 120 per hour for the greater part of the day – that is about one per minute each way; the foot passengers traffic is also very great about 800 per hour. A large quantity of foodstuffs arrive by this route also.⁴⁷

Considering the above, sanitary measures were adopted to safeguard the city at geostrategic points. At the Denton Bridge, outgoing cars were stopped and all passengers examined. Other outgoing passengers were examined and their underclothing received a spray of Kerosene emulsion unless they already had Naphthalene or Kerosene in their clothes. All bundles or boxes of clothing and bedding were inspected. If they contained

naphthalene they were passed if not they were sprayed.⁴⁸ These measures were applied at the southern terminus of the Western Nigerian Railway at Iddo Island. Passengers leaving the infected area by rail from Iddo station were examined as well as those at Denton Bridge. They were issued a pass which they presented in order to get a railway ticket.⁴⁹

The rise in the population of the port city of Lagos and the evolution of urban slums without sanitary and basic infrastructural facilities sustained epidemic reservoirs during outbreaks. For instance, the wide spread transmission of Plague at Oko Awo has been linked to the high population growth in an area of extremely poor sanitation and infrastructure. Indeed, population growth in the city witnessed poorly constructed homes void of proper ventilation and sewerage system (Appendix E). This was a suitable habitat for Plague infested rodents such as the black rats. Population pressure and the colonial cash crop policies led to the opening up of new areas. Thus, deforestation due to agricultural policies of cash crop production and informal sprawling of migrant settlements brought humans in close contact with animal species, most especially rats and fleas which constituted a readymade reservoir for the Plague bacilli.

In Lagos, de-ratting exercise carried out between 1924 and 1931 showcased the prevalence of *Rattus norvegicus* in the port city. The rats caught in the infected areas were examined at the Medical Research Institute, Yaba. By 5th August, 1924, out of a hundred rats caught in the de-ratting operation, five were found infected with Plague.⁵⁰ By 4th October, 1924, the Deputy Director of Sanitary Service confirmed the continuous infestation of Lagos environment by infected rodents as follows:

Infected rats have been caught in widely separated parts of the town from Carter Bridge to Oke Suna Street and as far South as Broad Street and we may assume that the disease is likely to extend and be a matter of months or even become endemic unless

the meteorological conditions prove too unfavourable.⁵¹

Rat destruction as part of the sanitary measures was carried out by means of traps and poison. The rat catching gangs were instituted and gradually expanded. Barium Carbonate was used as a poison in three grain doses made up with a preparation of maize. The various gangs work along lines converging on the infected localities and as many as possible of the rats caught were examined for Plague at a temporary laboratory opened for that purpose near the infected areas. The gangs were provided with buckets of disinfectant labelled with the area and the rats from suspected area had also a tag of cloth attached indicating more nearly where they were caught. The rats were of the specie – *Rattus rattus* and *Rattus Norvegicus*, the former being in the majority. Some of them were found infected with Plague bacilli.⁵²

Initially, rat destruction did not receive the assistance from the public as expected even with the offer of two-pence per rat caught. Cases were reported where baskets or other receptacles were inverted over traps set in premises by the official rat catchers to prevent rats being caught. The occupiers had feared should infected rats be caught their houses would be liable to disinfection and they themselves quarantined.⁵³ However, with the escalation of epidemic spread, this debacle was soon surpassed as rat destruction was carried on with energy and with much more help from the general public who brought on an average of about 200 rats daily to the rat stations which had been established. As at 22nd October 1924, out of the 1150 rats examined 41 were infected with Plague bacilli. Infected rats spread to previously uninfected areas. Indeed, infected rats were caught nearer and nearer towards the south of the town. Human cases tend to occur in the most insanitary huts and houses.⁵⁴ Subsequently, by 4th November, 1924, rat infection had extended south of Broad Street. Also, infected rats were caught in Marina and Iddo.⁵⁵ The sustenance of

Plague among rats in the city advanced with 1927 reporting an infection index of 1.07% and by 1929, 0.54%.⁵⁶ The infestation of Lagos with Plague bacilli and the consequent spread of its reservoir through rats-human relations in the city symbolizes the nature of environmental degradation and poor living conditions brought about by European imperialism and colonial urbanism. In Lagos environs, most of the villages in the Ijebu province where Plague had occurred including the town of Ijebu Ode, were de-ratted. In order to keep the sanitary state of the larger villages satisfactory, the general sanitary supervision of all villages over 2000 inhabitants was instituted in 1927. Hence, the mobilization of additional sanitary inspectors to these areas was effected in order to stem the rapid spread of Plague from Lagos environs to the hinterland.⁵⁷

By 1929, the anti-Plague work in Lagos was organized under the Medical Officer of Health who presided over the routine district work of house to house inspections. A special anti-Plague labour gang, each consisting of two self-contained units with headmen and equipment was allotted to each of the five districts in the township. A senior African Sanitary Inspector under a European Inspector in each district closely supervised all the Sanitary and anti-Plague operations in his district. In this manner, intensive scavenging, deratting, disinfection and enforcement of all regulations and bye-laws affecting sanitation was ensured.⁵⁸ Up to 1931, the de-ratting and other usual anti-Plague measures were carried out in Lagos and its neighbouring towns and villages of the Ijebu, Egba, and Oyo.⁵⁹

4.4 Town Planning

Considering the rapid spread of Plague by rodent based reservoir in Lagos most marginalized built environment, it was 'strongly emphasized that the only effective method of dealing with the disease is by rat proofing houses as efficiently as practicable

together with general house improvement and town planning'.⁶⁰ In the face of the prevalence of the disease in August 1925, the Lagos Chamber of Commerce admitted the need for a general and rigorous town improvement based on sanitary lines, the absence of it would be impossible to suppress the epidemic.⁶¹ On the 2nd November, 1926, Acting Deputy Director of Sanitary Service stated that some infected houses especially those with palm thatch roofs, complete double walls of bamboo or galvanized iron, could not be disinfected without demolition.⁶² Thus, the Senior Sanitary Officer in charge of anti-Plague measures was given discretionary powers in the matter of the demolition of buildings only in cases where de-ratting was impossible.⁶³ In 1927, it was noted that in addition to the elimination of rat runs and holes, it was absolutely necessary to deal at the same time with certain other constructional features in the houses – bamboo linings of wall and grass roofs which provided ideal protection for rats and facilitated reinfestation (Appendix E).⁶⁴ Hence, anti-Plague inoculation, evacuation, disinfection and rat destruction were considered temporary measures. Thus, it was reiterated that an effective disinfestation exercise involving demolition of insanitary buildings was necessary in order to abate the outbreak.⁶⁵

The procedure for demolition of the so called 'insanitary dwellings' was to cover both infected and non-infected houses as against the Public Health Ordinance which confers the power to demolish infected buildings only. This measure was felt to be necessary in such areas such as Oko Awo, 'where the ground water level is only a few inches from the surface, the huts are on plinths of earth or the floors are raised inside with refuse; these plinths and raised floors contained the rat burrows...Between the tops of mud walls and the roof is a space favourable to the climbing rat'.⁶⁶

By November 1924, the demolition of infected houses was on course and a Plague Compensation Board saddled with the responsibility of awarding claims to owners of such houses was established.⁶⁷ This harsh town renewal and urban planning measure led to the concealment of patients in homes out of the reach of medical and sanitary inspectors. Also, patients were smuggled to hidden locations in order to avert anti-Plague measures involving property acquisition and demolition. Alike, in Hong Kong and South Africa, patients were hidden or relocated to distant areas. Also, many Plague cases and deaths were unreported while dead bodies were smuggled to new locations. This pattern of local responses fostered the spread of the disease. However, unlike in Lagos where forceful demolitions of buildings were greeted with mild protest and passivity, local responses in Hong Kong involved riots and unrest which undermined the colonial anti-Plague measures.⁶⁸

By March, 1926, the colonial officials perceived this measure as inadequate in the face of continuous infestation of Plague in the city. Giving reasons for the weakness of this approach, the Director of Medical and Sanitary Service, Lagos posit:

As regards permanent measures there are the houses demolished, compensation for which in 1925 amounted to 1,647. This year already a considerably larger sum has been paid as 3,195 compensation for houses or huts demolished under the Public Health Ordinance. This action can only be taken in the case of houses where infectious disease has occurred and cannot be effectively dealt with otherwise. This is a very costly method of dealing with insanitary huts and leaves adjacent huts equally bad which ought to be demolished but are not known to be infected.⁶⁹

Thus, the perceived permanent measures to contain the epidemic included a sort of slum clearance involving the demolition of the overcrowded and insanitary areas. Also, it was decided that the building of huts and houses be guided to prevent harbourage to rats.

In addition, it was noted that the building of rat proof markets was crucial in order to accommodate all traders who stored their wares (mainly foodstuffs) in huts and marketed their merchandise on the public streets which attracted rats.⁷⁰ Hence, it was obvious that managing Plague in the port city is in-exclusive from general improvement in housing, sewerage and waste disposal in the native quarters.

Meanwhile, private enterprise had not succeeded in providing sufficient housing accommodation and it lacked the capacity of doing so in the colony. In addressing this debacle, the colonial officials felt that a complete general demolition of perceived unsanitary areas became imminent and government policy should be refocused on providing immediate accommodation for an estimated ten thousand persons to be evacuated during the slum clearance operation in Lagos.⁷¹ As observed by the Director Medical and Sanitary Service, Lagos:

The condition of affairs in Lagos is well known, and little can be done to improve even the most insanitary areas until a layout is provided elsewhere. The responsibility of Government in this matter cannot be minimized and immediate action is called for. The first essential in my opinion is the formulation of a definite town planning scheme for the extension of Ebute Metta. Possible extension at Apapa and in other locations might also be considered.⁷²

It was admitted by the colonial government that the serious overcrowding in Lagos was a problem of long standing, and the attendant dangers to the public health had been brought forcibly to notice by the present outbreak of Plague. Thus, it was decided that a Town Planning Committee be appointed to oversee the construction of temporary camps with temporary buildings as well as the re-planning the lay-out of the town of Lagos on permanent lines.⁷³ Consequently, two major locations in Ebute-Metta and Yaba were identified as suitable locations for urban expansion in Lagos. First, the piece of land which

lies East of the Railway and North of the new Railway Station at Ebute Metta, that is, in the vicinity of the Medical Research Institute. The other phase of the scheme is the land to the West of the Railway and more or less due west from the Medical Research Institute in Yaba.⁷⁴ This town-planning arrangement hitherto referred to as the Yaba Development Scheme was designed to be self-supporting and to prevent overcrowding on the allotted 80 plots. The buildings were constructed of Bamboo with corrugated iron roof with a concrete wall foundation and cement floor. The cost of each apartment was estimated at £130. Transport facilities were provided linking Yaba to Tinubu Square. Consequently, an amendment of the township boundary and building Bye-laws was imperative to include the newly acquired area.⁷⁵

A major challenge of public health in colonial Lagos was a poor sewerage system. The colonial administrators introduced faecal potty as the standard sewerage disposal system in the port city. These faecal potties were often used by members of the household to full capacity before they were collected and disposed into the Lagoon by commissioned labourers - the 'night soil men' locally called *Agbe po*.⁷⁶ This scenario was contested by Fela Anikulapo Kuti (the Nigerian Afro beat legend) proverbial musical narrative challenging the hygienic basis of this British inclined practice in Lagos – as a reflection of the ills of Eurocentric-modernism. Fela's observation was earlier noted by the colonial Medical and Sanitary Department in 1929 as follows:

In Lagos, which is a first-class township, public pail latrines are provided. The pails are removed by labourers at night to depots where they are placed on a tramway and taken out of the entrance to Lagos Harbour and emptied into the lagoon in the early hours of the morning. Normally with ebb tide the pails contents get carried out to sea, but if the flood tide is running at the time of emptying, considerable quantities of faecal matter are carried back into the Lagoon and up five Cowrie Creek. Both the public latrines and the system of disposal of the sewage in Lagos are unsatisfactory.⁷⁷

Despite the ills of this colonial sewerage system, a colonial report in 1931 asserts the persistence of the practice especially in native African areas. While septic tank installations were installed in European areas like Ikoyi, 'the general methods of night soil disposal remain the same, bucket latrines being used in the township and in other areas where funds permits this system'.⁷⁸ In essence, the sewerage management system of the British in colonial Lagos contributed to the creation of unsanitary spaces in the city. This constitutes a major danger to public health in the city.⁷⁹ While this hazardous waste constitute a reservoir for pathogenic culturing in various homes, its careless disposal by the night soil men might have bred rodents (rats, fleas) which fostered the endurance of Plague transmission in the port city. In this light, the Yaba Development Scheme was constructed without drainable sewerage system. Consequently, waste collection by the night soil men proved unhygienic. Thus, an urgent attention was called to the absence of drainage in connection with the kitchens, bath places and the latrines in the housing scheme.⁸⁰ Hence, it was decided that the type of soak-away pit used in the European quarters at Ikoyi be provided in this respect.

In 1928, the stage was set for a permanent town-planning of Lagos. This was marked by the establishment of Yaba Estate. Thus, it was deemed necessary to make modifications to the temporary housing experiment of the Yaba housing scheme. These modifications include the use of concrete walls instead of bamboo and a more spacious and ventilated rat proofed apartments.⁸¹ The Yaba Estate was subsequently provided with facilities such as Dispensary, Sanitary Office and Stores.⁸² In vigorous drive towards permanent urban planning, expansion and renewal in Lagos, the colonial government under section 3(2) of the Lagos Town Planning Ordinance established the Lagos Executive Development Board (LEDB) on 31st December, 1928. The Board was composed of the commissioner for Lands, the Deputy Director of Sanitary Service, Assistant Director of Public Works, the

Administrator of the Colony, and the Surveyor-General.⁸³ From January 1929, the LEDB was in charge of demolition activities as well as urban planning and reconfiguration of Lagos built environment.⁸⁴

By February, 1930, it was no longer a policy of the colonial government to pay compensation for demolition of buildings under section 27 unless on special cases – especially of handicapped victims.⁸⁵ This measure was seen by the local population as a preconceived plan to aggravate the poverty level of ordinary Lagosians in the name of modernization and not necessarily a necessary Plague-control measure. Indeed, a letter of appeal from the royal stool of Lagos to the colonial government dated 17th September, 1930 posits:

We the...indigenous Prince and recognized Chiefs of Lagos ... beg to bring to your notice that demolition of houses by the Town Council or Health Office employees under the pretence of anti-Plague measures is becoming rampant in the town and has made many souls homeless. Some old and penurious people who inherited these houses from their ancestors have of necessity found it quite impossible for them, at the present time, to rebuild the houses after the demolition because they have no resources whereby to provide ways and means for rebuilding with the recommended materials. We have found out that the houses demolished included many that had not been derrated but simply because they look old.⁸⁶

Thus, the *Eleko* and Chiefs pleaded with the colonial government to consider an amendment to the Public Health Ordinance in order to stop the demolition of all old houses in the town that does not constitute immediate public health risk.⁸⁷ The colonial government responded to the petition of Lagos white cap chiefs that no houses are demolished because they are old and that the sectional or whole demolition of houses was required to render many premises safe for human habitation. Quoting the Medical Officer for Health, the Active Administrator of the Colony asserted that ‘people who are quite

happy in dark, damp, ill-ventilated and rodent infested houses are a danger to the whole community through encouraging Plague and other diseases'.⁸⁸

The colonial government continued with its demolition plan amidst public protest and uncertainty. As the *Lagos Daily News* of 7 January 1931 noted 'notices has been issued on 31st of December last [year] for the acquisition by the Lagos Executive Development Board of a large area of land containing houses at Oko Awo'.⁸⁹ This was replicated in Surulere and other areas in colonial Lagos.⁹⁰ The implementation of this town planning act involved the eviction of the occupants of buildings marked for demolition without adequate provision for alternative accommodation.⁹¹ The plight of the victims of urban renewal was captured by the *Lagos Daily News* of January 12, 1931 as follows:

The whole of the members of the household of the late Senr Pedro Pacheco at Oko Awo after whom Pedro street took its name held a family meeting in the compound...to deliberate upon their outlook in the light of the present acquisition which is depriving them of the whole compound and to guess, if they cannot propose, where they have all to go to.⁹²

The acquisition and demolition of houses in the infected areas was based on the legal standing of lands that falls within the area scheduled for reclamation and replanning, under section 15A of the Lagos Town Planning Ordinance, 1928 inserted by section 6 of Ordinance No. 37 of 1946, the LEDB was empowered to prohibit the construction of buildings in such areas. While it was prepared under certain conditions to allow repairs and alterations to existing buildings, it could not as yet allow erection of new once except on the written understanding that they will be demolished by the owner with no claim to compensation immediately the land was required for reclamation and re-planning.⁹³ This was the legal guiding principles of the clearance and development of the densely

populated area in central Lagos Island perceived to be a ‘conglomeration of filthy shacks built close together with insufficient light and air space for the inhabitants’.⁹⁴

However, the colonial drive for modern town planning in Lagos is believed to have been frustrated by financial challenges that accompanied the global depression of 1929-1934. Consequently, the Public Works Department (PWD) reported in 1931 that all activities of the Department had been dominated and restricted by changes in the financial situation, which called for ‘searching adjustment involving the postponement and reduction of expenditure on works’.⁹⁵ Thus, the colonial government observed in 1935 that ‘the improvement of congested areas is proceeding, if somewhat slowly, by the enforcement, with discretion, of the relative sections of the Public Health and Township Ordinances but work has been hampered by lack of funds for compensation’.⁹⁶ However, the visible implementation of the urban planning ideas that emerged during the Plague years gained momentum after the Second World War (1939-1945). The Surulere Housing Scheme coincided with the slum clearance exercise that commenced in 1951. By 1957 out of the over 3000 people evicted from Central Lagos due to slum clearance, only about 2000 were resettled in Surulere. By this time, housing facilities at Surulere had reached 550 already occupied homes. Unplanned temporary retail outlets were constructed by the displaced on the new site for commercial activities. By the end of 1959, a number of people inhabiting the new settlement sprang up to about 7300 due to the new removals from Central Lagos amounting to about 4300 persons. While mortgage facilities was provided for plot acquisition, the reluctance of the displaced to leave Surulere after their new businesses and other endeavours had been consolidated, led to the construction of an additional 600 houses in order to meet increasing housing demand. This brought the total housing facilities available in Surulere to 1513 units.⁹⁷

Apart from the Yaba and Surulere Housing Schemes, the Apapa housing scheme was established by the LEBD to provide accommodation for between 15000 and 20000 persons who were to be relocated from central Lagos congested area to new up to new and modern housing units near the place of employment. In addition, it was established to provide facilities for the shipping firms and large exporters and importers to warehouse their goods.⁹⁸ The experience of the Ebute Metta, Yaba, and Surulere housing schemes located outside the Island with attendant inconvenient distance from the centre of economic activities as well as the transportation and communication challenges that were encountered seem to have triggered a preference for a new settlement on the Island. This scenario led to the intensification of reclamation exercise. For instance, to make the land in Apapa suitable for a human settlement, 5,000,000 cubic yards of fillings had to be deposited over the site. This was followed by the reclamation of the whole of the low-lying ground within the township for settlement purposes.⁹⁹ Consequently, by 1954, the Apapa scheme covering an area of about 1,000 acres including about 750 acres of reclaimed swamp which had been developed.¹⁰⁰ Unfortunately, while the slum clearance operation led to the displacement of many Lagosians, by 1954 the scheme was suspended and the LEDB focused on rehousing schemes in Surulere, Oke-Suna and Ikoyi areas of Lagos.¹⁰¹

In 1948, the LEDB acquired Victoria Island with a sum of £400,000 from the original owners- the Oniru family of Lagos. Meanwhile in April 1956, the Federal Government and LEDB started considering the reclamations of Victoria Island in order to provide a new building estate which would encompass the whole of the Island. This was to involve the complete reclamation of the area of South West Ikoyi stretching from the Creek Hospital up to Jinadu village. This new development would involve the reconstruction of the two worst bridges in Lagos, the Five Cowrie Creek Bridge and the Onikan Bridge, and

a new road from the southern end of Kingsway which would join Marina.¹⁰² While the earlier inhabitants of Victoria Island were relocated to Maroko, the LEDB proceeded with clearance and reclamation exercise leading to the establishment of a skeletal modern housing scheme on the Island. The postcolonial government of Nigeria developed the scheme into full capacity. However, the inhabitants of Maroko which had increased to about 300,000 were forcibly ejected by the post-colonial government in the 1990s in order to pave way for a new urban housing scheme.¹⁰³ This trend of slum clearance and forceful eviction of the urban poor has been a colonial gene ingrained into the postcolonial DNA.

4.5 Biomedical Healthcare

The colonial government deployed biomedicine in the fight against the scourges of Bubonic Plague. Indeed, the Infectious Disease Hospital served as the primary observatory centre for Plague clinical pathology. Suspected victims and the dead were examined at the hospital.¹⁰⁴ By 31st July, 1924, Haffkine's prophylactic, the Plague vaccine, was distributed for inoculation purposes.¹⁰⁵ The Plague vaccine was warmly received by Lagosians. An observer noted in a report entitled '*Ara Ilu E lo gun'pa*' that Lagosians troupe to the venue of the vaccination center in order to ward off the epidemic outbreak – '*Agbotele loro ana, a ri i pe gbogbo awon enia o nlo gun'pa won lodo awon Dokita...A be nyin, e lo gunpa*'.¹⁰⁶ Despite the prevalence of smallpox inoculation, it appears that this was the very first time general vaccination was performed using the vaccine injector on the shoulders of Lagosians. According to the annual report 1924 of the Yoruba newspaper – *Eletí-Ofe*: '*a tile gbo ti apa bibu fun arun ile-igbona; sugbon a ko fi ki a te pinni gun enia lapa ki a da egbogì si I (inoculation) se itan pa fun wa ri*'.¹⁰⁷

As at 7th August, 1924, four medical laboratories were functional for diagnoses. Medical laboratories at the Medical Research Institute, Yaba, The Public Mortuary, Lagos, the Infectious Diseases Hospital, Ikoyi and the Clinical Laboratory in Lagos played a significant role in the diagnoses of Plague bacilli in victims. The functionalities of these laboratories involved the movement of all dead bodies to the public mortuary for examination. The pathological evaluation of disease transmission was vital to Plague control in Lagos. Secondly, smears (bodily fluids) from glands or lungs of victims were taken by medical practitioners and sent to the Medical Research Institute, Yaba or the clinical laboratory, Lagos for examination. Rats were sent to the Medical Research Institute Yaba for examination.¹⁰⁸ Hence, between 9th and 22nd September, 1924, Dr. H. Horrison of the Medical Research Institute, Yaba, examined 208 smears from glands and other organs, in connection with 89 post-mortem examination of which 34 dead bodies were infested with Bubonic Plague.¹⁰⁹

By 10th September, 1924, prophylactic inoculation with anti-Plague vaccine had been carried out on 2041 Lagosians. These vaccines were imported with ten thousand doses arriving Lagos fortnightly.¹¹⁰ Inoculations were performed in Lagos using the Yersin Serum.¹¹¹ However, the colonial officials lamented that ‘in spite of the bio-medical and sanitary efforts to contain the epidemic, its spread continued unabated.’¹¹² This trend of Plague resistance to biomedical intervention especially vaccination was noted by a native observer at the peak of the outbreak in 1928 thus – ‘the efforts of the Sanitary Authorities to combat the onslaught of the ravaging Plague appears to be a futile one despite the energy, tact and money expended on it’.¹¹³ A likely cause of Plague resilience in Lagos was unveiled in a private correspondence from the British Consul, Dakar to the Governor General of Nigeria on the 25th September, 1924. According to this private letter, as

observed by Dr. Rigollet (a Plague specialist), anti-Plague inoculation amidst an epidemic may be responsible for further spread of the disease. As observed by Dr. Rigollet:

Inoculation was...never practiced at any place where Plague existed in epidemic form, the reason being that, in cases where persons were but slightly infected, and might, indeed, at the moment be unaware of having contracted the disease, the effect of inoculation was enormously to increase the activity of the Plague organisms in their systems, and correspondingly to add to the difficulty of subsequent treatment.¹¹⁴

However, this perception was relegated to the background as the colonial officials in Lagos felt that general inoculation provides some reasonable levels of protection against Plague. Consequently, by 6th November, 1924, about 47100 people had been inoculated through house to house inoculation. While no objections were raised by the natives to such house to house inoculation, in some cases a few people ran away to evade it. Thus, the supply of anti-Plague vaccine as a prophylactic and of serum for treatment was maintained.¹¹⁵ Inoculations were performed in Lagos and through the cooperation of the African private medical practitioners. Yersin's Serum was used in 100 c.c. doses intravenously.¹¹⁶

As observed by S. Riedel, up till now 'no preexposure prophylaxis or vaccine is available for Plague'.¹¹⁷ Hence, the effectiveness of the Plague vaccine depends on population health outcome after a Plague epidemic. In the case of colonial Lagos, the unusual rise in Plague cases despite biomedical interventions suggest that the Plague vaccine administered was largely ineffective. As the colonial clinical notes puts it - the Plague vaccine was 'given without doing any apparent good.'¹¹⁸ Having realised the limitation of the Plague vaccine, medical officials experimented with several toxic

chemicals out of desperation. According to N.D. Sharp, a medical doctor at the infectious disease hospital during the outbreak in 1926:

The treatment of Bubonic Plague is still so unsatisfactory and so inadequate that I venture to write this note on a method of treatment which I adopted in about a dozen cases with very encouraging results. In the outbreak at Lagos in the last four months of 1924, over one-hundred and fifty cases of Plague were admitted into the Infectious Diseases Hospital...The death-rate was about 80 per cent. Various methods of treatment were adopted. These included intravenous injections of anti-Plague serum (Lister Institute) in doses of 50 to 250 c.c., intravenous injections of a solution of iodine (this solution contained twice as much iodine as tinct, iodinitis) in doses of 10 to 60 minims, intravenous injections of N.A.B., and of perchloride of mercury ...carbolic acid. This treatment given repeatedly and alternately proved of considerable value in mild cases...Towards the end of the epidemic, owing to the unsatisfactory results attained, I decided to try the effect of injections of "Bayer 205".¹¹⁹

However, considering the environmental determinants of Plague, the animal reservoir had a direct impact on the control of the disease. In essence, Plague diffusion is primarily determined by the relationship between the local animal reservoir and the human population. The absence of the disease amongst the European population in areas with good infrastructure such as Ikoyi attests to this reality. This phenomenon showcases the implication of social stratification on epidemic control and public health in general. Of course, the segregated native Africans living in slum communities were more exposed to the black rats (the animal reservoir). Despite the limitation of biomedicine, the activities of the medical and sanitary officials with direct bearing on deratting was instrumental to the termination of the Plague foci in 1931 (see Table 3).

Furthermore, in order to inform the general public on the pattern of Plague transmission, its medical and social pathology as well as risk factors, it was suggested that a public notice to be published on weekly bases in the *Government Gazette*. This public

notice was to include ‘all dangerous infectious diseases occurring in Nigeria based on the weekly Report on Infectious Disease already sent to Government’.¹²⁰ However, this arrangement was forestalled by the consideration that such a publication might be detrimental to public health as a result of possible ‘undue prominence’ that might be given to the existence of these diseases by such public advertisement in the *Government Gazette*. Thus, the government decided to abide by the existing arrangements under the public health ordinance in which ‘all the official information that is necessary is communicated to the proper authorities through the ordinary official channels’.¹²¹

Furthermore, the rapid spread of the epidemic between 1924 and 1931 strained the available labour resources in the health sector. Thus, additional personnel were subsequently requested and recruited from other parts of British West Africa. This reality was noted by a colonial official, Sgt. Donald Cameron as follows: ‘I have telegraphed to Sierra Leone in order to borrow six Royal Army Medical Corps Sergeants from that command if possible...as the European staff of the Medical and Sanitary Department in Lagos is insufficient’.¹²²

In Lagos, biomedicine interfered with the sociocultural system of the society. It weaknesses in the area of language barrier between the British medical practitioners and the native patients reduced local confidence in the colonial hospitals. This was aggravated by the ill treatment and high mortality rate recorded at the infectious disease hospital during the outbreak. Also, the perception of illness by Lagosians transcends biomedicine as the African method of disease etiology encompasses spiritual divination as well as pharmacological intervention. Hence, the limitation of biomedical knowledge in this regards necessitated the local perception of its inefficiency. In Asia, biomedical intervention in the Plague outbreak of Hong Kong presents a similar challenge as the

Chinese detests British doctors and native doctors were allowed into the colonial hospital to administer treatment to Plague victims. This anti-western attitude was reinforced by the high fatality rate of Plague patients who were treated by British medical doctors which amounted to about 77%.¹²³ In Bombay India, epidemic Plague was conceived in the context of native religious tradition as Indians sought treatment from the goddess of Kali as well as traditional remedies and biomedicine thereby projecting myriad anti-Plague interventions in the country.¹²⁴

4.6 Religious Interventions

The examination of responses across the three major religious divisions in colonial Lagos – African Traditional religion, Christianity, and Islam unveils the cultural perceptiveness of the epidemic in society. Studies have shown that during epidemic outbreaks, people had reacted to pestilence differently based on their religious tenets. As observed by M.D. Dols:

To delineate more clearly the respective values and practices of late medieval European and Middle Eastern societies at the time of the Black Death a comparative analysis will be employed. Such an explicit comparison brings insights into the basic natures of both cultures. In dealing with elusive social attitudes and their communal expression, comparative analysis may guard against a parochial and simplistic interpretation of human behavior.¹²⁵

To this end, this section discusses the religious interpretations of the Plague in Lagos under two subheading – Ethno-medical intervention as well as Christian and Muslim responses. The ethno-medical intervention analyses how the epidemic was perceived through the lenses of African traditional religion (the indigenous religion of the Yoruba ethnic group). Christianity and Islam were inherently bounded up with the advent of

colonialism in Lagos. The two religions were products of cultural imperialism from the Middle East. The responses of the adherent of the three religions are discussed as follows:

Ethno-medical Intervention

Ethno-medicine is a study of traditional methods of healing otherwise known as traditional medicine.¹²⁶ The place of African Traditional Medicine (ATM) in the control and containment of epidemic Plague in colonial Lagos has been undermined in colonial records. While African medicinal intervention in the fight against Bubonic Plague preceded governmental intervention during the outbreak, the colonial archival records only managed to document a minute of such episodes. These preceded the official index case of Dansoko that was diagnosed in a post-mortem examination on the 28th July 1924.¹²⁷ These earliest cases were linked to the residential area of Momo Bogobiri, an importer of kola nut, who died on the 7th of July 1924 with several of his family members and servants. It is noteworthy that these earliest cases were independently noticed by a 'native doctor'.¹²⁸ According to a report prepared by C.J. Sharp and H. Morrison of the Medical Research Institute Yaba on the 9th September, 1924:

Evidence points to the fact that cases had actually occurred before this date and that it was the peculiarly sudden and complete death of an entire family, including servants in a certain house, which attracted attention. This localized death roll was also independently noticed by a native 'doctor'. The natives suspected poisoning as the cause.¹²⁹

Surprisingly, the colonial document has failed to substantiate on traditional medicinal intervention in this respect. No wonder, there is a dearth of scholarly literature on the role of African traditional medicine in the control and containment of epidemic Plague. The present study therefore advances the existing literature by unveiling the nature and pattern of local medicinal intervention in this regard. The dearth of official data on this subject

compels the researcher to consult oral sources in the reconstruction of this missing link. Thus, the focus here is the tangible contribution of African traditional medicine in the treatment of Bubonic Plague. In this light, the practice of ethno-medicine is examined in line with the traditional diagnoses and treatment of Plague in colonial Lagos.

Traditional medicine in colonial Lagos was an offshoot of pre-colonial indigenous knowledge of the Yoruba people. This informal cluster of the public health system is characterized by the traditional medical personnel often referred to as the Traditional Healer. According to the World Health Organization (WHO), a Traditional Healer 'is recognised by the community in which he lives as competent to provide health care by using vegetable, animal and mineral substances and certain other methods based on the social, cultural and religious background as well as on the knowledge, attitudes and beliefs that are prevalent in the community regarding physical, mental and social wellbeing and the causation of disease and disability'.¹³⁰ In colonial Lagos, the persistent shortage of Western trained medical practitioners and the limited scope of western medicine ensured that traditional healers were the major source of medical healthcare for the indigenous community.¹³¹ Being a sacred profession, the bulk of the practitioners of ethno-medicine in colonial Lagos emanated from family lineage of native doctors or herbalists.¹³² This social structure of ethno-medicine provided an enduring lineage based oral documentation of traditional approaches to medical care in the city overtime. These traditional healers are men and women 'who by a process of long apprenticeship, ranging from 2 to 30 years...become qualified to practice traditional medicine'.¹³³ This form of education necessitate that the apprenticeship undergo years of training from a master practitioner who assesses the mentee over several years before graduation. At graduation the apprentice must have learnt the necessary method of disease diagnoses and herbal preparation. This medicinal tradition is passed from one generation to another through oral

tradition. Scholars have shown that even in the post-colonial era, in cities such as Lagos and Ibadan with a comparatively widely spread modern health facilities than rural areas, the inhabitants still depend largely on traditional medicine.¹³⁴ As observed by D.D.O. Oyebola¹³⁵ in 1980, ‘a large percentage of the people still visit traditional healers or have native medicine secretly brought to them when they are in hospitals’.¹³⁶

In order to understand the role of traditional healers in epidemic intervention, it is pertinent to examine the structure of traditional medicine in colonial Lagos as a spring board for our study on Plague control. Traditional ethno-medical practitioners in colonial Lagos can be classified based on their method and scope of practice. Using this approach, four categories of traditional healers were identified – *Babalawo*, *Onisekun* or *Adahunse*, *Eleku-leja* (traditional pharmacists) and the specialists (traditional bone-setters, psychiatrists, midwives). The *Babalawo* is a priest of the Ifa Oracle. He diagnoses both physical and spiritual illnesses by consulting *Orunmila* the Ifa oracle. The oracle in turn prescribes remedies which may include or exclude herbs. Thus, the *Babalawo* often combines the capacity of a diviner and an herbalist. Contrarily, an *Onisekun* (a pure herbalist) refers to a maker of medicinal herbs who does not divine but carries out diagnosis through physical assessment of the patient’s symptoms.¹³⁷ Those who are referred to as *Leku-leja* are traditional pharmacists, usually women who have stores in major Yoruba markets where the materials to compose herbal remedies are sold. These women prescribe remedies for several physical ailments. The specialists are traditional healers who focus on a particular practice like bone-setting (traditional orthopaedic). The bonesetter cures fractures by combining spiritual powers with herbal preparations and technical knowhow. The traditional psychiatrists specialize in the care of mentally sick patients. This is done through spiritual powers and herbal preparations. The traditional midwives (often elderly women) oversee child delivery and may use spiritual powers or

herbal preparations during the process.¹³⁸ In colonial Lagos, the *Araba* (head of Ifa Chieftaincy) oversees the administration of Native medical practitioners.¹³⁹ The *Araba* Chieftaincy traced its origin from the time of King Dosunmu of Lagos. The traditional medical practitioners are often contacted by the King of Lagos during epidemic outbreaks to intervene appropriately through ethno-pharmacological and spiritual responses for a quick clearance of infectious diseases.¹⁴⁰

Traditional medical healthcare was practically (but unofficially) at the forefront of public health care in colonial Lagos. It is noteworthy that despite the subjugation of African traditional medicines through Public Health Ordinances that aimed at instituting biomedicine in Lagos, the colonial government recognized the activities of ethno-medical practitioners in the city as they were not excluded from taxation. As noted by the several reports of the *Nigerian Gazzete* during the colonial era, the Native Doctors are classified into two categories for administrative convenience - *Onisegun* and *Babalawo*. While the *Onisegun* earns an average income of between 50 to 100 pounds, the *Babalawo* earns between 30 and 50 pounds per annum. Hence, the *Onisegun* was liable to pay 10 Shillings and the *Babalawo* 6 Shillings as taxation to the public treasury.¹⁴¹ The widespread practice of traditional medicine in colonial Lagos was noted by the administrator of the colony of Lagos in 1931 as he asserts:

There are several societies of Native Doctors in Lagos. About 20 years ago, a scheme was found by Dr. Sapara for the registration of Native Doctors...The object of this registration was partly to protect the public from the depredations of charlatans and also to obtain information on matters of interest to the Medical Profession. I understand that considerable interesting information has been obtained with regard to herbs and roots by keeping in touch with Native Doctors. The registration of a name does not give any status to the Native Doctor concerned nor can unregistered quacks be prevented from practicing. It appears however, that all families in Lagos employ a Native Doctor and there is considerable competition.¹⁴²

Complaints of the natives about the racist nature and inadequacy of biomedical healthcare prior to the outbreak of Plague abounds in the colonial newspaper reports. For instance, *The Nigerian Advocate* of Wednesday, January 16, 1924 reported the case of a young man who lost his child ‘under what must have been very painful circumstances to him...the young man rushed to the colonial Hospital one night, with his child suffering from what looked like lock-jaw. On reaching the hospital, he found that neither of the two Doctors who apparently were doing the duties of Resident medical officer was in. He nevertheless lost very little in finding there whereabouts, but no amount of begging was able to induce the one Doctor or the other to come to the child’s immediate aid. Three and a half hours or thereabout, after admission before some assistance was forthcoming, needless to say, the child died next day’.¹⁴³ Hence, in the face of ineffective and discriminatory biomedical healthcare service, the house of the traditional healers was the first point of call for most of the sick among the local population. Indeed, the traditional healers independently discovered the outbreak of Bubonic Plague and were the first to diagnose and treat the epidemic in Lagos prior to and during biomedical intervention.

Plague was ethno-medically diagnosed as blood poisoning in colonial Lagos.¹⁴⁴ This diagnosis was made after ruling out any personal spiritual inclination of the disease through divination. However, considering the nature of Plague as societal issue affecting many people at once, the traditional healers performed rituals to ward off the spirit of infirmity affecting communities in Lagos. This was affirmed by a report entitled ‘*Ona ti olukuluku bam o ni ko ma gba*’ thus-

*O ta si wa l’eti pe awon Omusasegun, awon
Onisegun ati Adahunse lo se ipade tiwon pelu awon
Oloye Onifila-funfun l’ose to koja lati wewe bi nwon
o ti se se etutu ti Edumare yio fi da owo iku ode*

*wonyi duro. A gbo pen i Iga Olowo ni nwon se ipade
yi.*¹⁴⁵

The outbreak of Plague in Lagos was unprecedented. Hence, its traditional diagnoses were based on the ethno-medical system of etiology that compares the fixture of new diseases with endemic once. In this respect, the treatment pattern also, entails broad range metaphysical and ethno-pharmacological approaches. In this light, considering, the feverishness, swelling on the body, change of eye and skin colour, Plague was compared by the native community to smallpox. As a local commentator puts it ‘now, it is a common knowledge that what is termed “Plague” by the Sanitary Authorities is Smallpox in another form which is deceptive and unless the Government is advised to take serious steps to alleviate the horror of Smallpox, it is our fear that matters will remain just the same’.¹⁴⁶ Countering the foregoing perspective, an observer during the outbreak argues:

Here and there one hears “Plague! Ahem! Plague indeed.” Almost every fever strong enough to prostrate one is confidently passed for “Igbona Ode yi” meaning Small pox. When the “Flu” was on it was another form of S.P., and now “Plague” is just the same. The illiterates are however excusable for they have not seen anything like it before and it has not been handed down to them by their forefathers as all great events of the past have been... We may have forgotten the “Black Death” which devastated Europe in the middle age...but could not blamelessly say we do not remember the Great Plague of London 1665, followed by the Great Fire of 1666. Now as school-children we have learnt of Jenner’s discovery of Vaccination as a preventive measure against Small Pox, and we have heard that the Small Pox was formerly prevalent in England. The fact that European’s activity in researches in all fields is ceaseless is enough to make us know that if Small Pox (once their own common scourge) and Plague (Bubonic Plague) had anything in common or were one and the same thing only in dissimilar form, they would have discovered it long ago...if it is “S.P.” it should have spread to Europeans. But it hasn’t, and whilst they are immune you can never get the Government to tackle the Plague question with all its strength without being pestered. It may be unintentional but it does seem the

Government is never thoroughly roused when European life is not in danger.¹⁴⁷

While Plague was compared to smallpox by the natives, there was no indication that smallpox treatment was administered to Plague victims as the *sopona* (smallpox priests) were already proscribed at the time. At the onset of the outbreak in July 1924, Plague was described generally as ‘Ajakale-Arun’¹⁴⁸ - an epidemic, without a particular local name. In fact, the nomenclature of the disease did not change until September 1924 when the general public were sensitized on the outbreak of the Plague disease. The local name used for the epidemic, ‘Arun Ekute’¹⁴⁹ (disease of rats) which started appearing in the vernacular press from March 1925 was derived from biomedical understanding of Plague as a zoonotic disease spread mainly by the black rat. Thus, considering the general ethno-medical diagnoses of the disease as blood poisoning (infection), diverse broad range herbal intervention tagged ‘aporo’ (anti-blood poisoning liquid solution) were employed as both preventive and control drugs.¹⁵⁰ As observed by the herbalists and native doctors, ‘aporo’ is specifically effective in the early period of the disease manifestation. In essence, the herbal remedies are preventive traditional pharmaceuticals.¹⁵¹

Hence, considering the consensus among the local healers on the efficacy of ‘aporo’ medicine as preventive remedy against the infestation and progression of *Yersinia pestis*, it becomes imperative to examine the composition of this type of traditional herbal remedy for further enquiry. The two plants that were identified as vital components of ‘aporo’ used separately for the preparation of remedies during the outbreak are *imi-esu* and *eyilata*. The ‘aporo’ remedy includes the liquid extract from a stand of *imi-esu* plant.¹⁵² This remedy was perceived to be multifunctional in the treatment of many forms of blood poisoning.¹⁵³ The evaluation of the ethno-pharmacological potency of traditional herbal medicine used in Plague control is salient as supportive evidence of historical

reconstruction. Thus, the identification and chemical analysis of a naturally available herb used as an anti-Plague remedy provides a tangible evidence for the evaluation of ethno-medical intervention in Plague control. *Imiesu* has been identified by botanists as *Ageratum Conyzoides*. The scientific studies of *Ageratum Conyzoides* are still recent and on-going. This plant belongs to the family *Asteraceae* of *Eupatoriae*. The genus *Ageratum* consists of about 30 species but only a few species have been investigated.¹⁵⁴ *Conyzoides* is a tropical plant that is very common in West Africa and some parts of Asia and South America. It is an annual branching herb which grows to approximately 1m in height characterised by white flowers. The plant grows commonly in the proximity of human habitation and thrives in loamy soil (Plate 4). Corroborating the claim of the local healers, *Ageratum conyzoides* is reported to have been used traditionally in various parts of the tropic - Africa, Asia and South America for curing various diseases – constipation, ulcers and wounds, mental disorder and infectious diseases as well as headaches, pneumonia, diarrhoea, leprosy, and gynaecological disorder, itching, rheumatism, sleeping sickness, and gum disease.¹⁵⁵

The other plant identified as a Plague remedy is called *eyilata*.¹⁵⁶ This plant was confirmed by the traditional healers to have been used as an effective broad range remedy against blood toxicity. Consequently, it was used for malaria, typhoid, diarrhoea diseases, pneumonia, and other diseases that may result in complications in the human blood including Plague. The pharmaceutical components of the plant used include the leaves, roots and seeds which are crutched in water and taken both internally and applied externally. This plant grows naturally in Lagos environment and has been identified by botanists as *Biden Pilosa* which grew naturally in tropical environment (Plate 5). Recent studies have shown the potential pharmacological properties of *eyilata* (*Biden Pilosa*) as an antimicrobial, antibacterial, anti-inflammatory, and anti-malaria agent.¹⁵⁷ Similarly,

Ayurveda medicine involving the use of several traditional remedies played an important role in Plague control in India.¹⁵⁸

The colonial authorities observed in 1926 the weakness of biomedicine in the anti-Plague campaign thus – ‘it did not appear as if any treatment tried was very effective’.¹⁵⁹ This is particularly obvious in the high mean mortality rate of the official case-fatality accounting for 94.02% between 1924 and 1931. However, in the face of ineffective biomedicine, the potency of ethno-medical intervention in Plague control has been affirmed by some residents of Lagos during the outbreak. The majority of the respondents gave a reminiscence of how their infected family members and friends had visited local healers and were cured of the disease afterwards.¹⁶⁰ However, Plague disease projects similar symptoms of other diseases thereby making such claims to curative properties of local herbs vague without laboratory analysis. These finding shows that further enquiry into the pharmacological potency of ethno-medical remedies in West Africa is imperative. While the existing literature is lacking in the understanding of ethno-medical intervention in Plague control, an assessment of place-based preventive ethno-medical responses discovered showcases the potentials of ethno-medicine as preventive remedy against the emerging devastating tropical infectious diseases like Ebola. The decolonization of public health services in modern Africa is imperative in this regard.

Christian and Muslim Responses

The outbreak of Plague in Lagos witnessed the making of special prayers by churches and Mosques to cleanse the society of the disease. The crisis appears to have created a common front by the three different religions to combat the epidemic through given of alms, religious parade and sacrifices. As noted by an observer:

Awon alata, oniyo, eleja ati awon obinrin miran ti nwon nta wosiwosi ni Ita Faji ta omi sile ni ojo Alamisi to koja, ojo keje osu yi. Ni owuro awon Alufa Imale pese si abe panu Ita Faji, nwon se adura fun Alafia Ilu ati pe ki Allah le se idekun inira gbogbo ti o wan ni ilu yi, ki o le mu owo iku ojiji ati aisan wonyi duro, ki o si le ma jeki oja won ma ta. Ni gbogbo ojo yi ko si enikan ti o ta ata tabi iyo afi awon eleran nikan. Gbogbo awon obinrin yin i nwon nse ti nwon nso, nwon nje, nwon sin mu; nigbati o di irole nwon fon si ijo, gbogbo won, tomo-owo tomo-ese ni o da buba aso ebi tin won si njo. O dara lati se adura ati lati se onje se sara fun awon alaini, sugbon buba aso ebi ti nwon da, ti nwon si njo kakiri igboro iyen nikan ni o ru wa loju o. Bi o ba si je nipa ijo won ni Olorun yio fi gbo adura, nje o dara na, iyen wu wa o.¹⁶¹

It was noted that the Baptist church and a mosque conducted a week prayer to ward off the epidemic. Indeed, many Lagosians believe that offering of prayers could help control the epidemic. On 3 September 1924 a commentator in a local newspaper called on Christian and Muslim leaders to offer prayers as a Plague control measure thus:

Bi a ba mu ijo Baptist ti nwon fi ose kan se adura fun ilu kuro, ati awon ijo Imale kan ti a sese gbo wipe nwon bere lati ma se adura fun rogbodyan aisan ti o mbe ni ilu nisisiyi'...lai fa oro gun lo titi mo, mo fi okan irele kigbe si Bishop Oluwole lati pase fun gbogbo awon ile isin to ba je tiwon, lati si Church lale fun ojo riro; be nan i mo si tun fi ohun anu ke si Eni-owo, A.N. Cole ti Ijo Wesley lati se agbaro lori oro kanna yi; bayi ni mo si tun kigbe pe awon Ijo ti Baptist lati tun bere re gege bi ti isiwaju, iwo Eni-owo Johnny Williams jowo tun pe awon ero ijo re jo; enyin ijo Omo-ibile (African Churches) mo be nyin, e je ki gbogbo wa jumo t'ewo adura pelu orin anu si Eleda wa lati gba wa ninu gbogbo airoju to mbe l'ode, Eni-owo, Superintendent J. S. Williams, Bishop S.A. Coker, Superintendent G.A. Oke, Eni-owo E.A. Akinola titi lo kan church Eleja ati ijo awon Brotherhood, mo be gbogbo nyin ni o, e je ka jumo f'ohun s'okan, ka foro idarigi lowo Oba-Asekan-maku. Lemomu Ligali, olohun iyo, dakun, pe awon janma re jo fun isowopo adura si Allah lati fi oju anu wo igboro ilu wa...e mase fi oju tinrin oro mi yi arara; nigbana, lehin ose kan lehin na, ki gbogbo was i f'oku sile lati wo iyipada nlanla ti Olorun Olodumare yi o se si arin ilu wa...Iwo ati emi, ni yio leke iku ati aisan ojiji to mbe ni igboro wa loni.¹⁶²

Furthermore, inferences on the religious belief on Plague etiology was obvious in the type of prayers published in the local press during the outbreak. For instance, one of such prayers by one Awoluje entitled ‘*Adura Pataki fun Ajakale Arun to mbe L’ode Eko nisisiyi*’ compared the Lagos scenario with the pestilences that was inflicted on the Israelis under the leadership of Moses and Aaron in the wilderness and called for forgiveness of sins thus:

Obangiji Olodumare, ninu ibinu re, Iwo to ran arun sara awon enia tire l’aginju, nitori isote won si Mose ati si Aaroni; ati pelu, lasiko Dafidi Oba ti Iwo si fi Ajakale-arun pa Egba-marun-di-logun omo enia bi awa, sugbon sibe na ti iwo si tun ranti anu Re to si da awon iyoku si; se irufe iyonu be si awa otosi elese, ti a nfi arun nla awon Oyinbo npe ni Bubonic bewo nisisiyi ni asiko awon Baba nla wa, to sin pa a lase fun Angeli apanirun ni lati dawo ibaniwi duro, beni ko si wu o nisisisi, Iwo Baba, abowo-gbogboro ti nyo awon enia re l’ofin, lati fa arun buruku ti a npe ni Bubonic yi kuro larin t’omode on agba ani lara onile on alejo wa; bi Iwo tile ti jare lati binu si wa nitori aisedede wa, sugbon...gba gbogbo wa ninu iponju ati aibale okan olukuluku gbogbo wa ninu iponju ati aibale okan olukuluku gbogbo awon enia lode Eko wa.¹⁶³

This foregoing paragraphs showcases the perception of Christians in colonial Lagos might have been the end product of sinful behaviour that were prevalent in the society at the time. For instance, S.A. Aderinto¹⁶⁴ has noted the rampant sexual perversion in the city at the time. Also, K. Mann, observed that the ‘the arrival of large numbers of adult male immigrants in [colonial] Lagos created a shortage of women. Those present in the town could alter their domestic situation by leaving one man for another’.¹⁶⁵ The perceived sinful pattern of urban livelihood in colonial Lagos was seen as the cause of the outbreak by the Christians and therefore, the need to seek God’s face in forgiveness of sins.

The response of Muslims to the Plague outbreak in Lagos appears to be in harmony with the Islamic perspective on sicknesses. The Plague epidemic in Lagos was seen by Muslims as God’s sent and therefore can only be controlled through prayers, sacrifices

and offering of alms. This scenario was substantiated by a local report on 10 September 2017 which affirmed that the Muslims of Lagos sacrificed a cow to appease Allah in order to put an end to the epidemic Plague in Lagos. According to the report: *‘inu wa dun lati gbo pe a won Imale lo se etutu tiwon lona esin won ni Sunday to koja lo yi. Ki Baba de eti Re si ohun ebe wa. Agbo wipe nwon pa malu kan ni Mosalasi Odun. Eyi ha nko? Ki Olorun ma ko way o ninu rogbodyan iku ojiji wonyi ke’*.¹⁶⁶ In accordance with the Qur'anic teaching, the sacrifice of a cow by Muslims in colonial Lagos is not to appease Allah by blood, but rather to encourage personal sacrifice by sharing limited resources with the less privileged in society – a sacrifice of good will which may provoke God’s intervention. This interpretation is in tandem with the Qur'anic narrative on the sacrifice of Ismail which counters blood atonement.¹⁶⁷

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¹¹⁴ NAI. CSO 26 13001 Vol. III. 'Extract from a Private Letter – from the British Consul, Dakar, to His Excellency the Governor, dated 25th September (1924), 1.

¹¹⁵ NAI. CSO 26 13001 Vol. III. 'Plague in Lagos: Report for the fortnight ended 4th November, 1924'. From the Deputy Director of Sanitary Service, Lagos to the Director of Medical and Sanitary Service, Lagos. Memorandum No. 333C/DMS/24 of 6th November (1924), 2.

¹¹⁶ NAI. CSO 26, 13001 Vol. III. 'Plague in Lagos', From the Deputy Director of Medical and Sanitary Service, Lagos to From the Director of Medical and Sanitary Service. Memorandum No. 333B/DMS/24 of 8 October (1924), 4.

¹¹⁷ S. Riedel, 'Plague: from natural disease to bioterrorism', *Baylor University Medical Center Proceedings*, Vol. 18, No. 2 (2005), 122.

¹¹⁸ NAI. CSO 26 13001 Vol. II. 'Report of Plague in Lagos –southern Nigeria' From the Director Medical Research Institute Yaba to the Director of the Medical and Sanitary Service, Lagos- Report No. 48/M.R.I/24 of 9 September (1924), 2-4.

¹¹⁹ N.A. Sharp, 'A note on the treatment of Plague in Nigeria with "Bayer 205"', *Transactions of The Royal Society of Tropical Medicine and Hygiene* 19, no. 8 (1926), 482.

¹²⁰ NAI. CSO 26, 13001 Vol. VIII. 'Plague in Nigeria'. From the Director of Medical and Sanitary Service, Lagos to the Chief Secretary to the Government, Lagos. Memorandum No. 333I/DMS/24 of 16th July, (1926), 1.

¹²¹ NAI. CSO 26, 13001 Vol. VIII. 'Plague in Nigeria'. From the Director of Medical and Sanitary Service, Lagos to the Acting Secretary to the Government, Lagos. Ref. No.13001/954 of 26 July, (1926), 1.

¹²² NAI. CSO 26 13001 Vol. II. 'Plague in Lagos'. Report by Sgt. Donald Cameron, Ref. No. 13001/173 of 12 September, (1924), 3.

¹²³ Sakar, 'Fleas, Faith, and Politics', 34-5.

¹²⁴ Ibid.

¹²⁵ M.D. Dols, 'The Comparative Communal Responses to the Black Death in Muslim and Christian Societies'. Retrieved 4 September 2017 from <https://web.stanford.edu/class/history13/Readings/MichaelDol.htm>.

¹²⁶ J. Gertsch, 'How scientific is the science in ethnopharmacology? Historical perspectives and epistemological problems'. *Journal of Ethnopharmacology*, Vol.122, No.2 (2009): 177-83.

¹²⁷ NAI. CSO 26. 13001. Vol. I. 'Out-Break of Bubonic Plague in Lagos'. Medical Research Institute, Yaba, Report No. 8/M R.I/24 of 7 August (1924), 1-4.

¹²⁸ NAI. CSO 26. 13001 Vol. II. 'Report on Plague in Lagos –Southern Nigeria', Ref. 48/MRI/24 of 9 September (1924), 1.

¹²⁹ NAI. CSO 26 13001 Vol. II. 'Report on Plague in Lagos – Southern Nigeria' From Medical Research Institute Yaba to the Director of Medical and Sanitary Services, Lagos. Ref. 48/M.R.I./24 of 9 September (1924), 1.

¹³⁰ World Health Organisation (WHO), *The promotion and development of traditional medicine. WHO Technical Report Series*. (Geneva: WHO, 1978), 9.

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- ¹³⁵ Oyebola, 'Traditional Medicine and its Practitioners among the Yoruba of Nigeria', 23.
- ¹³⁶ Ibid.
- ¹³⁷ D.O. Olayiwola, 'The Aladura: Its Strategy For Mission and Conversion in Yoruba land, Nigeria'. *ORITA* 19 (1) (1987), 48.
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- ¹³⁹ NAI. Comcol. I. 857. 'Araba Chieftaincy', From the Secretariat, African National Religion Society to the Commissioner of the Colony, Lagos. 6 April (1944), 1.
- ¹⁴⁰ Ibid.2.
- ¹⁴¹ *The Nigerian Gazzette*, 28 May, (1931), 286.
- ¹⁴² NAI. Comcol. I. 857. Vol. I. 'Native Doctors Society', From the Administrator of the Colony, Lagos to the Senior Resident, Oyo, Province, Oyo, Ref. A.C. 857/ 20, (1931), 1.
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¹⁴⁷ *Eleti-Ofe*, , ‘The Plague’, 19 December (1928), 8.

¹⁴⁸ *Eleti-Ofe*, ‘Enyin Ara Ilu, E gba Kadara’, 3 September (1924), 3.

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¹⁶¹ *Eleti-Ofe*, 'Asaje o, Ewe a je, ko-se-ko-se nit i Ilakose', 13 August, (1924) 4.

¹⁶² *Eleti-Ofe*, 'Arun l'ta, arun l'odi', 3 September (1924), 9.

¹⁶³ *Eleti-Ofe*, 'Adura Pataki fun Ajakale Arun to mbe L'ode Eko Nisisiyi', 3 September (1924), 10.

¹⁶⁴ S.A. Aderinto, 'Dangerous Aphrodisiac, Restless Sexuality: Venereal disease, biomedicine, and protectionism in Colonial Lagos'. *Journal of Colonialism and Colonial History*, vol 13, no. 3, (2012), 1-14.

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CHAPTER FIVE

IMPACT OF BUBONIC PLAGUE ON LAGOS

5.1 Plague Mortality, Labour Productivity and Increased Public Expenditure

The period 1924 to 1931 marked a continuous outbreak of epidemic Plague with a total of 1,947 cases with 1,813 deaths, accounting for a 94.02% case-fatality rate in Lagos (Table 6).¹ While the data on Plague morbidity and mortality only represents officially recorded cases based on laboratory observation, these official figures provides a guide on the pattern of the outbreak. The outbreak of infectious diseases has ‘influenced history through both their demographic impact and their effect on the behaviour of societies’.² Epidemics impact societies due to the fear of contagion. This manifests in the area of poor labour productivity due to poor health and fear of infection. Thus, good health is, in fact, vital to labour productivity and societal development.³ Indeed, the newness and the rapid transmission of the disease in Lagos created an ideal scenario for an epidemic shock and its consequent fear of contagion in the society. However, the population of Lagos in 1921 was 99,700 and 126,000 by 1931.⁴ Considering this demographic statistics, Lagos experienced a sustained trend of population growth during the outbreak. Whereas the death of 1,813 people due to Plague and the attendant residential mobility might have led to labour losses,⁵ the effect of this scenario seems to have been cushioned by continuous immigration due to rural-urban migration.

Considering the impact of the outbreak on labour productivity, the Nigerian police observed that the ‘outbreak of Plague in Lagos imposed additional duties on all ranks of all ranks of the police, and roughly, an average of ninety rank and file have been employed continuously on duties in connection with the suppression of [the] outbreak’.⁶ However, additional personnel were recruited which made it ‘possible for the Plague duties to be performed without entirely depleting the beats in Lagos’.⁷ It was observed that this strain on police service did not result ‘in any great increase in crime’.⁸

Table 6. Plague Morbidity and Mortality in Lagos, 1924-1931

Year	Cases	Deaths	Case-fatality Rate %
1924	414	343	82.8
1925	104	88	84.6
1926	497	476	95.8
1927	155	151	97.4
1928	519	509	98.0
1929	188	176	93.6
1930	65	65	100.0
1931	5	5	100.0
Total	1947	1813	

Source: Annual Medical and Sanitary Report, Nigeria, (1931), 27; Annual Report, Nigeria, No. 1710, (1934), 21.

Movement restrictions and the redundancy of contacts of Plague victims in quarantine stations led to labour losses. A case in view is quarantining of a certain number of the African artisan staff in the Nigerian Railway in an isolation camps as being contact cases during the outbreak. These labourers were paid their full salaries in the quarantine centre.⁹ However, an assessment of the Revenue Account of the Nigerian Railways between 1923 and 1930 gives no indication of poor labour productivity (see Table 7). For instance, the gross revenue generated by the Nigerian Railways was £1,408,165 in 1923 before the outbreak. The gross revenue increased to £1,659,387 in 1924, £2,030,430 (1925), £2,393,069 (1926), and £2,459,849 in 1927. In 1928 at the peak of the outbreak, the organization generated a net-revenue of £30,935. This progressive pattern of income generation continued in 1929 and 1930 with a net-revenue of £36,745 and £71,536 respectively. These figures suggest that the operations of the Nigerian Railways were not significantly hampered by the Lagos Plague,

despite some cases of labour loss. The epicentre of the Plague was native areas such as Oko-Awo, Anikantamo, and Elegbata.¹⁰ The concentration of the informal working groups (labourers and traders) among residents of these native areas suggests a dearth of comprehensive labour statistics to evaluate Plague implications for labour productivity. However, it has been observed that ‘unemployment was low during the 1920s’ in Lagos.¹¹ This was a result of a thrived international trade in primary goods like cocoa that preceded the economic depression of the late 1920s and the early 1930s. The low incidence of unemployment in the 1920s served as a stimulus for the influx of economic migrants into Lagos from the hinterland.¹² This migratory factor ensured steady supply of labourers in the city despite labour losses due to Plague mortality and morbidity.

Table 7: Annual Revenue Estimates, Nigerian Railways, 1923-1930 (in £)

Revenue	1923	1924	1925	1926	1927	1928	1929	1930
Gross	1,408,165	1,659,387	2,030,430	2,393,069	2,459,849	-	-	-
Net						30,935	36,745	71,536

Source: Annual Blue Book, Nigeria, (1923), p.46; Annual Blue Book, Nigeria, (1924), p.46; Annual Blue Book, Nigeria, (1925), p.48; Annual Blue Book, Nigeria, (1926), p.48; Annual Blue Book, Nigeria, (1927), p.48; Annual Blue Book, Nigeria, (1928), p.52; Annual Blue Book, Nigeria, (1929), p.50; Annual Blue Book, Nigeria, (1930), p.50.

Combating Plague in Lagos was a dent on colonial revenue due to increased cost of healthcare, environmental health and administration (see Appendix F). This is obvious in the area of increased medical and sanitary wage bills, cost of equipment and drugs. For instance, the de-ratting operation involved the payment of two pence per rat to the rat catchers with 162,353 rats caught in 1926 alone and over 100,000 caught on a yearly basis.¹³ Thus, considering this volume of rodents, the de-ratting exercise constitutes a high recurrent expenditure during the outbreak. Also, sanitary operations involving disinfestation and demolition of buildings and its attendant compensation impacted public revenue. An official

communication between the Director of Medical and Sanitary Service and the Chief Secretary to the Government, Lagos on 5 January 1926 unveils this reality as follows:

I have to report that £3716.11.6 of the Special Warrant No. 138/25-26 for £25000 issued on 30th November, 1925, has been expended and the balance of £1283.8.6 is insufficient to meet certain large claim awarded by the Plague Compensation Board for houses demolished in Lagos...Another special warrant will be necessary and I suggest that it be for £3000. The main expenditure would be on account of compensation should it be necessary to demolish other huts or houses.¹⁴

By 8th March 1926, it was obvious that the chief measures taken were purely temporary ones of anti-Plague inoculations, rat destruction, disinfection and temporary evacuation of infected homes. Hence, the Director of Medical and Sanitary Services lamented that ‘these are purely protective of human beings and do not in any way decrease the Plague infection in the town and at the same time costly’.¹⁵ For instance, a single campaign of anti-Plague inoculation in 1925 had cost £2,804 for Vaccine procurement, £2,915 expended in wages of medical practitioners involved in the exercise being a total of £5,717.¹⁶ Rat destruction had cost considerably more over £1000. Besides the foregoing expenses, there was the extra cost of disinfectants used both in the town and part, the cost of European Plague staff and the cost of patients and contacts in the Infectious Disease Hospital. In respect of the permanent measures involving demolition of houses. The compensation in 1925 alone amounted to £1, 647.¹⁷ The total expenditure on Plague in the first two years of the virulence, that is, 1924 and 1925¹⁸ are presented in Table 8.

Table 8: Plague Expenditure, 1924 and 1925

S/N	Description	1924 (£)	1925 (£)
(1.)	Payments to Medical Practitioners for Inoculations	-	4,184: 1: 0
(2.)	Compensation for buildings Demolished	257: 13: 8	4, 792: 8: 8
(3.)	Cost of Special Staff : (temporary Sanitary Inspectors, Post Mortem fees, transportation fees etc.)	3,035: 14:7	4, 791: 17: 8
(4)	General Expenses: (Drugs, diets for persons isolated, Appliances, Administration, temporary Accommodations, fumigation)	11, 414	5, 024:11:1
	Total Expenditure	14,708	18, 792: 18: 5

Source: NAI. CSO 26. 13001. Vol. VII. Statement of Expenditure on Plague during the year 1924/25; NAI. CSO 26. 13001. Vol. VIII. Statement of Expenditure on Plague during the year 1925/26.

The effect of Plague in Lagos was reflected in the steady rise of the Annual Expenditure estimates of the medical and sanitary Departments (Table 9). The medical recurrent and extra-ordinary expenditure stood at £199,694 and £4,558 in 1923 before the outbreak. These figures rose to £203,780/£6,442 in 1924. The year 1925 witnessed a slight deflation of the recurrent and extra-ordinary expenditure which was reduced to £199,001/£5,262. This is in tandem with a reduced Plague morbidity of 104 cases and Plague mortality of 88 deaths in 1925. This marked a downward slope when compared with 1924, which witnessed 414 cases and 343 deaths (see Table 6). The upsurge of Plague morbidity (497 cases) and mortality (476 deaths) in 1926 had serious financial consequences for the year. Consequently, the recurrent and extra-ordinary expenditure rose to £230,994/£8,331 in 1926, £250,404/£14,509 (1927), £270,445/£23,650 (1928), and £290,462/£41,038 (1929), and £318,645 in 1930. However, in a seemingly aggressive drive to stamp out the epidemic

by the colonial authority, the medical recurrent and extra-ordinary expenditures rose to £321,115/£26,007 in 1931, marking the end of the outbreak. As shown in Table 9, expenses on sanitation increased from £46,294 in 1924 to £49,785 in 1925, £59,856 (1926) as well as £73,765/£8,111 recurrent and extra-ordinary expenditure in 1927 and £78,885 in 1928. The Medical Research Institute, Yaba, Lagos was at the forefront of biomedical diagnoses and monitoring of the outbreak. It is not surprising, therefore, that the annual expenditure of the Institute experienced a steady rise from £4,881 in 1923 to £5,006 in 1924, and £8,034 in 1930.¹⁹ This increase in medical and sanitary expenditure between 1924 and 1931 validated the Plague expenditure illustrated in Table 8.

Table 9: Annual Estimates, Medical and Sanitary Expenditure, 1923-1931 (in £)

	1923	1924	1925	1926	1927	1928	1929	1930	1931
Medical (Recurrent)	199,694	203,780	199,001	250,404	250,404	270,445	290,462	318,645	321,115
Extra-ordinary	4,558	6,442	5,262	14,509	14,509	23,650	41,038	25,200	26,007
Medical Res. Inst.	4,881	5006	4954	7,238	7,238	7,168	6,967	8,034	7,551
Extra-ordinary			142						
Sanitary	48,842	46,294	49,785	73,765	73,765	78,885	-	-	-

Source: Annual Blue Book, Nigeria, (1923), p. 47; Annual Blue Book, Nigeria, (1924), p.47; Annual Blue Book, Nigeria, (1925), pp.49; Annual Blue Book, Nigeria, (1926), pp.49; Annual Blue Book, Nigeria, (1927), pp.49; Annual Blue Book, Nigeria, (1928), pp.50-3; Annual Blue Book, Nigeria, (1929), pp.50-1; Annual Blue Book, Nigeria, (1930), pp.50-1; Annual Blue Book, Nigeria, (1931), pp.50-1.

Furthermore, unusual expenses were incurred due to compensations as a result of alleged theft during sanitary operations. The disinfestation of houses during quarantine procedures resulted in many alleged cases of stolen properties. For example, the Compensation Board on Plague infection considered on 31st December 1925 the case of Mr. M.S. Batula in respect of property alleged to have been stolen from his house on 27th September 1924. The claimant had argued that he was removed to the Quarantine Station by the action of the Sanitary

Authorities, and during his absence no precautions were taken to safeguard his property and effects at 9, Bajulai Street, Lagos, and that owing to this lack of precaution he did sustain a loss by theft. The total amount of the claim as submitted is £212 but the Board considered £100 commensurate with the loss.²⁰ All these combined to increase public expenditure during the outbreak.

5.2 Plague and Trade

The Third Plague pandemic presents another major example where the initial outbreak in China was transmitted across the world through international trade and migration, reaching West Africa in the late nineteenth century - the Gold Coast in 1908 and 1924 from where it was transmitted to Lagos through transborder maritime trade in Kola nut. Thus, in answering broader questions in the wider historiography, it is pertinent to examine how transborder disease surveillance impact international and internal trade. To this end, the following questions were answered: Did the outbreak of Plague lead to the imposition of international trade and transit barrier on Lagos as an effective way of curbing disease transmission? What were the impact of transborder disease surveillance and quarantine measures on international and internal trade in Lagos?

The association of migration and trade with outbreak of infectious diseases is rooted in antiquity.²¹ This reality had led to the promulgation of transborder screening regulations in order to prevent sick travellers and infected cargoes from spreading infectious diseases to their destination.²² Indeed, rapid transborder trade flows between countries enhance the chances of disease transmission. In essence, 'countries are linked by the economic exchanges into an integrated epidemic system'.²³ The historical effect of Plague on trade is examined through the lenses of the nexus between quarantine measures, movement restrictions and

trade barriers as colonial responses. Historically, societies around the world instinctively feared and isolated victims of infectious diseases even before the scientific causation of epidemics was discovered.²⁴ For instance, this was the case in pre-colonial Lagos and elsewhere in Yoruba land, where victims of smallpox were isolated and quarantined by the *Sopona* priests.²⁵ Their belongings were subsequently confiscated as probable medium of pathogen transmission. This method was replicated in Medieval Europe where quarantine and sanitary laws were enacted to prevent the spread of Second Pandemic Plague – the Black Death.²⁶ However, the fear of contagion often impact society at socioeconomic level, especially as it influences migration and trade routes.²⁷

Lagos being essentially a trading economy was affected in the area of food supplies by public health measures of movement restrictions and road blockages due to the fear of contagion. An excerpt from a colonial newspaper, *The Nigerian Advocate* on Wednesday, July 23, 1924, described local responses to the reality of a new infectious diseases spread in town, thus: ‘About a fortnight ago, the unfortunate news spread about the town of the many deaths which occurred at Oko Awo district within a very few days. The incident was so dreadful in its effect that some of the residents had to take their flight by night to seek for shelter at other parts of the town’.²⁸ Indeed, there were reports of obstruction to trade and undignified manner in which these sanitary operations were carried out in rail stations and road blocks. Paragraphs appearing under Editorial Notes on page 4 and 5 of the *Spectator*²⁹ of Saturday, September 20 1924 alleged that the nature of spraying operations carried on at the Iddo Gate disallowed market women from passing through the gate before 6.30 am thereby obstructing food supply from the mainland to the Island.³⁰ The sanitary modalities, which required the screening of all persons and vehicles leaving the infected area very much countenance with the sentence - ‘all distinctly dirty persons should have their cloth sprayed with kerosene mixture’ was alleged to have been misused to intimidate the natives especially

market women that were deemed to fit perfectly into this categorization.³¹ The vernacular newspaper *Eletí-Ofé* was eloquent in observing this phenomenon (Appendix G). Describing this discriminatory nature of sanitary measures, a local commentator noted with apprehension the manner in which sanitary inspectors ordered local women to stripe off their cloths for disinfection: ‘*Se beni ki awon enia ki o ma sure ijaiya kakiri? Se beni ki a ma tu awon obirin ni aso ni ikorita l’ona Oyigbo, ki a ni kin won si idodo won sile, ki a ro Kerosene si i?*’.³² Advancing this discourse, *Awoluje*, a local observer noted that the repulsive nature of the sanitary officials created unnecessary panic among Lagosians which had the potentials of causing food insecurity:

*Ihale pelu ifeju ti awon osise bi Wolewole miran tile nlo je eyiti o nda aiya ja awon enia loto...nkan miran ni awon enia wa ti nwon mbe ni ilu bi Epe, Ikorodu, Ejirin ati awon ilu miran yio ka si, nipa bayi eru yio ma ba won lati ma mu awon nkan jije wa ta fun wa, awon nkan bi Gari, Agbado, Epo, Isu, Ogede ati awon ohun miran, oro na yio wa kuro ni wipe Aisan wolu, sugbon yio di pe Iyan wolu.*³³

The foregoing commentator noted that the colonial approach to Plague control would stop neighbouring agrarian communities such as *Epe, Ikorodu, Ejirin* and others from supplying food stuffs like *Gari, Agbado, Epo, Isu, Ogede* to Lagos. Consequently, the discourse would change from epidemic outbreak to austerity outbreak. This attitude of the spraying gang vis-à-vis ‘the fear of the disease or panic’ was admitted to have led to food shortage and scarcity on the Island as traders avoided the area.³⁴ The fear of contagion as well as harsh quarantine and sanitary measures impacted inter-regional trade and commerce in the port city. According to an extract of a minute of meeting of the Lagos Chamber of Commerce in August, 1925:

The Chamber is deeply concerned with the continued prevalence of Plague in Lagos, and the hinterland. We wish to point out that from July 1924 to August 1925 the port was in quarantine for 203 days...In addition to the grave menace to life, very great injury

has been done to trade, owing to the limitations placed upon the free movement of the native community who refrained from bringing in their produce for fear of being placed in isolation camps.³⁵

The inadequate food supply to Lagos from the hinterland led to the removal of the duty on imported foodstuffs in 1928.³⁶ This scenario was further complicated by the global economic depression that kick-started from 1929. Indeed, by 1931, the colonial government observed the ‘cases of various forms of deficiency diseases are reported from time to time and it is probable that much ill-health must be caused by a lowered resistance to infections caused by unbalanced diets’.³⁷ For example, the price of a ton of corn rose from £12 in 1924 to £14 in 1925 and £14:10 in 1926. Also, a lb. weighted Nigerian stock fish earlier sold for 1 shilling in 1923 and 1924 doubled in 1925, 1926 and 1927 when it was sold at 2 shillings per lb.³⁸ This price change occurred before the global economic depression that commenced in 1929 thereby ruling out global interference in this regard. Thus, the inflation as reflected by the changes in food price as the epidemic progresses reflect a disruption in internal trade from rural to urban areas due essentially to restrictive Plague measures and the fear of contagion.³⁹

However, these obstacles to internal trade in food items did not affect international trade in primary produce as preferences were given to the transporters and merchants involved.⁴⁰ Indeed, an acute trade restrictive measure such as border closure was not taken. Hence, the export trade statistics of the period show that the problem was adequately contained. Considering the export focused nature of the colonial economy, the British administrators in Nigeria encouraged a significant traffic of local produce to the European market through the Lagos port despite the Plague virulence. The port health services were positioned to examine and disinfect all outgoing and incoming cargoes and passengers.⁴¹ This public health measure was considered adequate to ensure the profitability of the British

enterprise in Nigeria. Also, Lagos being a non-agrarian urban centre, but essentially an international transport hub, was not really affected by Plague in the area of primary produce production. In ascertaining the impact of Plague on trade in Lagos, an analysis of the volume and values of six principal exports (cocoa, groundnuts, palm kernels, palm oil, tin ore and cotton lint) at the Lagos port is assessed during and after the outbreak from 1924 to 1932 in Table 10 and Table 11 respectively. The data presented in the tables are compared with figures of the early 1920s in order to ascertain possible significant changes in production and export levels.

Table 10. Volume of Principal Exports at the Lagos Port, 1924-1932

	1924	1925	1926	1927	1928	1929	1930	1931	1932
Cocoa (Ton)	36,696	40,325	35,246	35,334	44,310	50,544	47,850	47,526	62,956
Groundnuts (Ton)	65,261	112,582	102,864	67,260	81,579	111,489	106,192	128,307	129,223
Palm Kernels (Ton)	100,467	108,582	96,845	92,945	83,574	85,588	89,288	89,974	109,363
Palm Oil (Ton)	19,446	20,817	20,113	17,961	15,371	13,407	17,406	10,662	6,494
Tin Ore (Ton)	8,787	9,225	10,502	6,428	2,771	5,990	2,954	2,127	923
Cotton Lint (Cwt.)	87,645	126,067	168,980	96,295	72,565	114,682	153,562	66,097	17,445

Source: Annual Trade Reports, Nigeria, 1926 – 1935⁴²

Table 11. Value of Principal Exports at the Lagos Port, 1924-1932

	1924	1925	1926	1927	1928	1929	1930	1931	1932
Cocoa	969,319	1,357,578	1,252,846	1,868,171	2,237,757	2,129,090	1,617,501	974,731	1,295,253
Groundnuts	1,232,431	2,133,902	1,862,494	1,165,723	1,434,263	1,796,638	1,481,277	1,174,652	1,287,115
Palm Kernels	1,774,070	1,929,162	1,696,545	1,546,894	1,514,337	1,423,713	1,197,041	739,207	944,917
Palm Oil	610,171	712,051	678,083	534,945	452,532	374,657	424,634	142,115	84,867
Tin Ore	1,537,088	1,724,773	2,203,465	1,379,838	453,890	922,018	339,769	178,276	91,072
Cotton Lint	723,569	752,396	1,137,145	317,754	336,944	629,694	601,719	145,026	13,216

Source: Annual Trade Reports, Nigeria, 1926 – 1935⁴³

While the maritime import trade of Lagos was based on industrial goods of Europe and America, from 1924 to 1932, its export trade depended on primary produce like cocoa, groundnuts, palm kernels, palm oil, tin ore and cotton.⁴⁴ This is a case of an export trade featuring the British as a principal partner accounting for an average of 54%, Germany 20% and the United States 10%. On the other hand, the import trade was essentially concerned with industrial products of Britain amounting for an average of 70%, Germany contributes 9% and the United States 8%.⁴⁵ While the import trade of Lagos responds to export earnings and governmental fiscal policies, it was conducted with insignificant interruption in the 1920s as shown in Table 6 and 7. This is due to improved transportation networks following the economic bubble of the early post First World War era⁴⁶ and the political will of the colonial government to align with the imperial target of undisruptive raw material supply from the colony.

This scenario is corroborated by the values of principal exports which shows no significant disruption to production levels during the outbreak. For example, the production of two principal exports of Lagos – Palm Kernels and Groundnuts experienced a growth during the period. The quantity of Palm Kernels exported in 1920 is 80,386 tons, by 1929 it increased to 85,588 tons, 1930 (89,288), 1931 (89,974) and in 1932 a total of 109,363 tons

was exported. On the other hand, the quantity of groundnut exported in 1920 stood at 31,053 tons⁴⁷, by 1929 it increased to 111,489, 1930 (106,192), 1931 (128,307), and in 1932, a total of 129, 223 tons.⁴⁸ In the face of the Plague virulence in the port city, the great global depression that commenced in the period 1929-34 stimulated higher production levels as leverage for declining price of goods in the international market.⁴⁹ Elsewhere in the world, this was not the case in India during the Third Plague Pandemic where the trade value of the port of Bombay declined in the face of Plague control measures introduced amidst peculiar local dynamics with negative implications for international and inter-regional trade.⁵⁰ ‘In the years preceding the Plague, Bombay had exported large quantities of dry fish to Mauritius, Colombo, and Rangoon, but with the onset of Plague, the fish trade practically ceased to exist’ due to labour flight.⁵¹ In South Africa, movement restrictions especially in Natal undermined trade especially as trade restrictions were imposed.⁵²

In Lagos, the colonial approach to transborder epidemic control in the case of Plague from 1924 to 1931 differs from the contemporary public health policies especially in cases like Ebola in West Africa where borders are hurriedly closed due to the fear of contagion. The case of arbitrary borders drew across well-established culture areas in West Africa facilitates informal transborder flows,⁵³ thereby undermining official border closure as an effective epidemic control measure in the region. Whereas, implementing travel bans seems attractive, this phenomenon negatively impact international trade and increases poverty level, which technically undermines disease control as illustrated in the Ebola saga accounting for a reduction of economic growth from 4.5% to 2.4% in Guinea, 5.9% to 2.5% in Liberia and from 11.3% to 8.0% in Sierra Leone in 2014.⁵⁴ No doubt, the colonial export focused economy in a time of Plague helped accrue needed funds for Plague control.⁵⁵ This approach created a firm grounding and a lifeline for the economy during the global economic depression that coincided with the later period of the Plague outbreak.

5.3 Politics of Town Planning and Social Inequality

The archaeological excavation of the Nigerian area attests to the existence of urban centres in the pre-colonial era.⁵⁶ Lagos being one of the earliest areas of European intercourse in Nigeria became a pioneer of the European experiment with modern urbanization in the country. Thus, the transition from pre-colonial to colonial landscape stimulated several legal codes in the nineteenth and early twentieth centuries. These legal provisions focusing on the spatial structuring of the port city commenced with the 1863 Town Improvement Ordinance focusing on urban sanitation in Lagos.⁵⁷ The Plague outbreak in colonial Lagos triggered an unprecedented trend of urban planning and a massive improvement and expansion of the built environment in Lagos and in other places in Nigeria, especially from 1928 to 1959. This was projected in the recurrent and extra-ordinary expenditure estimates of the Public Works Department totalling £1,635,844 in 1928 at the peak of the outbreak compared to £356,549 in 1923; £394,886 (1924); £393,407 (1925); £611,493 (1926) and £1,045,419 in 1927. This progressive in public works had declined by 1931 due to the global economic depression. The public works expenditure estimate for 1931 stood at £705,054 and further declined in 1932 to £386, 168. This trend continued in 1934 (£232,529) and 1936 (£200,788). By 1939, after a remarkable recovery from the economic downturn the public works expenditure estimate rose to £565,446.⁵⁸ However, the financial commitment of the British colonial government to the World War II (1939-1945) meant that further progress in urban renewal and expansion be suspended till the post war years. Essentially, the harmony of the theory of 'African unhygienic race' in tandem with Plague outbreak helped the colonialists to justify an urban planning that entrenched elitist socioeconomic and political dominance in colonial Lagos.

While the existence of legal codes that reinforces segregation precedes the outbreak, the epidemic provided a legal ground for the institutionalization of this phenomenon in Lagos.

For example, the Cantonment Proclamation of 1904 was enacted to enforce the spatial segregation of European expatriate enclaves and the perceived diseased native settlements. Furthermore, the Public health Ordinance No. 9 of 1914 supported the forceful colonial acquisition of land for administrative purposes. This was followed by the Township Ordinance No. 29 of 1917⁵⁹ which was made to fine tune urban segregation along racial and ethnic line as well as create categorization and physical layout of towns. Following the outbreak of Plague in 1924, township enhancement programmes were implemented by Lagos town council which metamorphosed to the development of Apapa settlement scheme in 1926 as relieve for Lagos Island port congestion. The intensification of the outbreak in 1927 led to the dissolution of Town Planning Committees and the inauguration of Health Boards as their replacement. Amidst Plague outbreak, several governmental organisations sprang forth to combat the scourge. These include the Nigerian Port Health Service that was in charge of transborder screening of migrants and commodities at border posts. In the area of town planning, the Lagos Executive Development Board (LEDB) was established in 1928 to implement policies of slum clearance and urban planning.⁶⁰

The Lagos Town Planning Ordinance of 1928 was designed to address environmental decadence in the native settlements which had been subjected to neglect since the commencement of colonial rule.⁶¹ Thus, the 1928 Town Planning Ordinance made urban planning of the city including areas inhabited by the natives the prerogative concern of the colonial government. In order to implement these urban planning policies, massive landed resources were forcefully appropriated and the demolition of many native settlements was conducted.⁶² While the idea of compensation in cases of land acquisition and property demolition were considered and implemented in the interim, the colonial government reviewed this fair procedure in the long run leading to the impoverishment and destitution of the victims during the outbreak.⁶³

The 1930s were characterized by acute need for accommodation in Lagos. This predicament led to rehousing programmes at Ikoyi and Yaba mainly for European expatriates' staff and their servants.⁶⁴ Despite the excuses given for the delay in implementing an effective housing scheme in Lagos Nigeria, especially as regards the global economic depression, elsewhere in Britain, a total of 266,622 houses were built in 1933 alone during the depression marking over 2,328, 385 houses built in the country accounting for a whopping sum of over £671,000,000 since the First World War.⁶⁵ This circumstance showcases the developmental relationship between the imperial power and her colonies. A reflection of poor-will for developmental projects in the later, at least, prior to 1945. Indeed, the activities of the government agency involved in slum clearance and urban housing – Lagos Executive Development Board (LEDB) became very visible in the post Second World War era marking the reclamation of many parts of Lagos for housing development as well as slum clearance in native areas like Oko-Awo, Oke-Suna and Idumagbo.

The visible implementation of the urban planning ideas that emerged during the Plague years gained momentum after the Second World War (1939-1945). The forceful manner in which the LEDB acquired lands from indigenous owners and the delay in the implementation of the public housing scheme aroused local criticisms in the colonial Press. For example, a commentary that appeared in the *Daily Service newspaper* of Tuesday, 28 February 1950 read thus:

Back to the Lagos Executive Development Board, whether it is true or not that the LEDB's scheme for land development and housing of Lagos inhabitants hangs fire, the fact still remains that the development of the people's land and the disposal of them is the people's own concern. Oddly enough, it is government policy that appears averse to harnessing the immediate resources of the country for such improvement. As the LEDB is doing, with a profit motive, precisely what the country could do for itself --- raising loan for its project...we know for a fact that millions of pounds are otherwise invested ahead for development elsewhere

whilst Nigeria is put at the mercy of foreign investors and the British tax payers...we cannot afford to wait any longer for a bold government scheme of developing land in urban areas and providing adequate accommodation for the inhabitants.⁶⁶

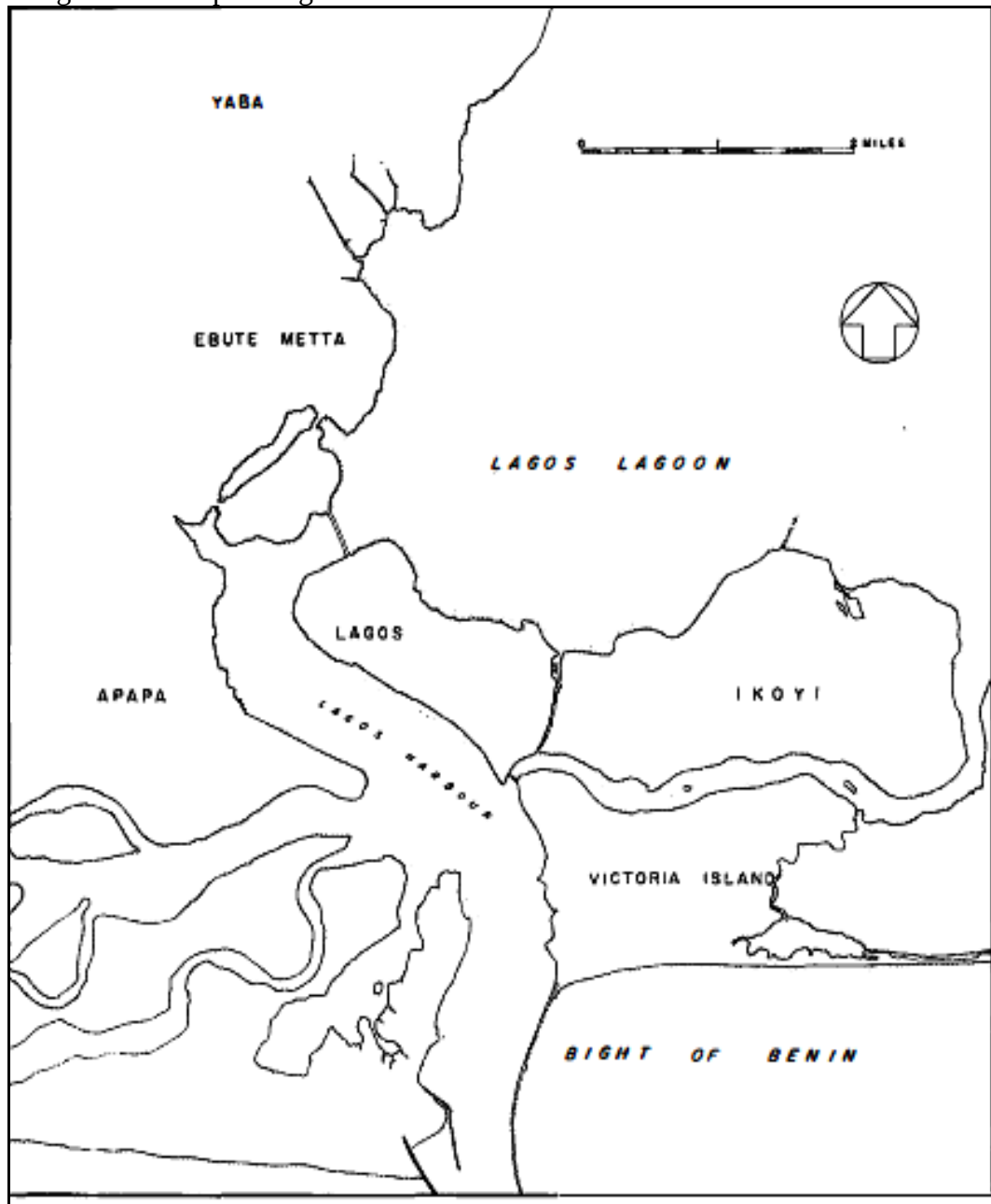
However, a £1,000,000 pound housing scheme for workers at Surulere was launched in 1955. According to the *Daily Times Newspaper* of Thursday, 24 November, 1955, 'the Governor-General, Sir James Robertson, yesterday turned the first sod at the site of the £1,000,000 Housing Scheme at Surulere. At least 1,300 houses will be built for the low income group of workers in the federal capital'.⁶⁷ The colonial government affirmed that this was a bold move towards containing the public health challenges of the overcrowded and insanitary slums in Lagos. It was also observed that this scheme became expedient in the face of rising homeless people living on the street of Lagos due to rapid population growth and inadequate urban infrastructure.⁶⁸ Apart from the provision of residential houses, the Surulere estate is also conceived to make provisions for schools, shops, and market, hospital and recreation grounds.⁶⁹ By 27 September 1955 a commentator in the *Daily Service* newspaper laments that the LEDB housing scheme 'evidently rules out workers from becoming property owners and condemns them to perpetual rack-rent [and that] the obvious corollary is that the prospective buyers are either the well-to-do citizens or aliens'.⁷⁰ In April, 1956, the *Daily Times* reported that legal hitch delayed the execution of the housing plan due to the problem of funding.⁷¹

However, by 1957, the Surulere Housing Scheme was in an advanced stage with occupants numbering over 2000 persons. The displaced of Central Lagos Slum clearance were expected to be resettled temporary at Surulere Estate.⁷² Meanwhile, as slum clearance was on-going at central Lagos, the Surulere housing project was gradually been developed.⁷³ Despite mild local resistances, police action was taken against deviant occupants in central Lagos and they were consequently evicted.⁷⁴ By 1957 out of the over 3000 people evicted from Central Lagos due to slum clearance, only about 2000 were resettled in Surulere.⁷⁵ Whereas the slum clearance project improved urban-environmental health in central Lagos with remarkable improvement on infrastructure, the new spatial features of larger roads,

fancy structures impacted land development for residential facilities as only 42 acres out of the 70 acres appropriated were made available for resettlement.⁷⁶ This phenomenon translates to displacement of about one-third of the former settlers and its consequent overcrowding in other areas (Figure 3). This was largely due to the simultaneous clearance and resettlement pattern of the scheme without consideration for rapid demographic changes stimulated by rural-urban migration as well as the natural growth in Lagos.⁷⁷ Whereas, the project accounted for a substantial fund from federal revenue, it ended up technically a capital loss.⁷⁸

A spatial domination that undermines social mobility seems to have formed a colonial urban pattern following Plague outbreaks in sub-Saharan Africa in the first half of the twentieth century. As L. Bigon observes, ‘considering the socio-economic tensions between the main urban sectors and the conception of the black population as a barbaric collective that threatened the order and health conditions in the “European” city, there is little wonder why the Plague was used so dramatically by those who favoured segregationist measures as a social solution’.⁷⁹ Indeed, the growth of African towns and cities in the colonial era has been associated with disorderliness and unhygienic spaces.⁸⁰ Epidemic outbreaks have been traced to environmental factors in urban centres such as “dirt and decomposing matter...concentrated in towns and especially in their least sanitary districts”.⁸¹ This argument emphasises the duality of society along “sanitary” and “unsanitary” spaces, while blaming the outbreak of epidemics on the “unsanitary” segregated and poverty ridden enclave of the urban centre. These disparities were “reinforced in colonial times by racial and related stereotypes about ... Africans”.⁸² This inequality in the history of public health played a major role in the socio-spatial making of post-colonial Lagos.⁸³

Figure 3: A map of Lagos in the 1950s



D.W. Griffin, 'Urban Development in Africa', p.38

The Slum clearance as an urban renewal technique promises the transformation of impoverished urban enclaves into a standard housing settlement, thereby breaking the cycle of urban poverty at spatial level. This was the case in Britain under the Housing and Slum Clearance Act 1930.⁸⁴ However, in the developing world slum clearance often entail the forceful removal of families without adequate provision of low income and decent housing

facilities necessary to resettle the displaced.⁸⁵ For example, in April 1956, the Federal Government and LEDB started considering the reclamations of Victoria Island in order to provide a new building estate which will encompass the whole of the Island. This is to involve the complete reclamation of the area of South West Ikoyi stretching from the Creek Hospital up to Jinadu village. This new development will involve the reconstruction of the two worst bridges in Lagos, the Five Cowrie Creek Bridge and the Onikan Bridge, and a new road from the southern end of Kingsway which will join Marina.⁸⁶ The area was acquired by the LEDB at the rate of £400,000 from the original owners- the Oniru family of Lagos.⁸⁷ While earlier inhabitants were relocated to Maroko (a Lagos suburb), the LEDB proceeded with clearance and reclamation exercise leading to the establishment of a skeletal modern housing scheme on the Island. The postcolonial government of Nigeria developed the scheme into full capacity.⁸⁸ In Maroko, Lagos, the inhabitants who had increased to about 300,000 in the 1990s were later to be forcibly ejected by the post-colonial government in order to pave way for an elitist new urban housing scheme.⁸⁹

In post-colonial era, prior to the Maroko evacuation in the 1990s, slum clearance in most cases without compensation and resettlement had been the blue print of governmental approach to urban renewal in Lagos. This was case amongst others, of Adeniji-Adele, Lagos in October 1975 with 5000 people displaced without compensation; Iponri, Lagos (December, 1976, 5000 people); Alaba, Lagos (August, 1977, 20,000 people); Ebute-Meta/Lagos Island (July 1985, 10,000 people) amongst other cases.⁹⁰ Similarly, in 2012, the Lagos State Government demolished, the slum of Makoko built on the Lagos Lagoon without housing provision for the evicted, who soon became urban destitutes. The Government had issued a letter giving the about 10,000 inhabitants 72 hours to relocate from the area as it claimed that their occupation constituted environmental, security, and economic nuisance.⁹¹ It

was the turn of the 40,000 inhabitants of Badia East in 2013, as the government destroyed the Lagos based slum. As observed by the *New York Times*:

For days, residents wandered the chaotic rubble-strewn field, near prime Lagos real estate. They were dazed and angry. Small children slept on the muddy ground. Men climbed the mounds of rubble, searching. In intense heat, women, men and children said they were hungry and sleeping outside. The government had destroyed their present, they said, without making any provision for their future. “I lost everything,” Mr. Momoh said. “We are trying to bring out some sticks, to look for our daily bread,” he said, poking the rubble. “We don’t have money to eat.” A 30-year-old cook, Kingsley Saviouru, said: “They demolished everything. They didn’t give us anything. We are here, suffering.”⁹²

Thus, the ineffective manner of slum clearance schemes in the history of Lagos from the colonial to the post-colonial era has encouraged the proliferation of slum settlements in an unending cycle of urban poverty and inequality. The forceful removal of the interim problem without tackling the root cause has necessitated the evolvment and endurance of slums in the city thereby making slums in the process of its unmaking. This is a phenomenon described by J. Mahoney as a ‘path dependency’ involving enduring historical landmarks that creates a colonial chain reaction which extends to the postcolonial era.⁹³ Indeed, the self-reinforcing sequence of colonial urban pattern in contemporary Lagos is self-evident. This is the case of enduring domination of the built environment by influential elites at the detriment of the masses. For example, this scenario is exemplified by the spatial disparities between Victoria Island and Obalende, Lekki and Makoko in the contemporary. It also symbolizes the institutionalization of the colonial model in new spatial developmental schemes. This circumstance exemplifies landscapes of inequalities planted by colonial administrators and sustained by post-colonial African elites – a socio-spatial representation of class struggle in society. This spatial inequality encompasses socioeconomic differentiations that borders on the access to infrastructure and social mobility.

5.4 Public Health Policies and the Subversion of Traditional Medicine

Every culture has its own method of curing illnesses. While orthodox medicine derived its thrust from the European empiricism movement of the seventeenth and eighteenth centuries, traditional medicine is a cultural heritage of the Global South. The peculiarity of traditional medicine lies in it being the ‘other’ due to European domination and cultural imperialism.⁹⁴ Indeed, ‘the epistemological terrain upon which both indigenous and Western health professionals traverse is not level, resulting in a hierarchy of knowledge, as well as superficial dichotomies between the indigenous and Western health approaches’.⁹⁵ Thus, globalization has impacted greatly on medical practices from one society to the other due to colonialism and its attendant suppression of indigenous cultures. Considering the destructive nature of colonialism on traditional healing system, Johnston noted that the ‘Native people may experience an intense identification with an existing, vibrant, traditional healing system in their community; a sense of longing for a largely destroyed tradition; outrage at a history of colonialism and its effects, including the hegemonic power of biomedicine’.⁹⁶ While traditional healers were not outrightly outlawed in practicing their profession in colonial Lagos, they operated under a legal code that technically made their practice unacceptable. For example, under the Nigeria criminal code Ordinance 1916, section 210, traditional healers are proscribed from divinatory diagnosis of illness or identification of a witch / wizard as a cause. This accounts for the silences observed in official colonial records in respect of ethno-medical intervention in Plague control. This legal code has been re-enacted and ingrained in the postcolonial legislature⁹⁷ thereby undermining ethno-medical practice.

In the colonial healthcare sector, African Traditional Medicine was misunderstood despite its historic provision of unique healing treatment to the local community.⁹⁸ In this respect, the coming of orthodox medicine led to the informalization of this healing tradition. Indeed,

traditional medicine suffered a decline under the watch of the British colonial administrators. This pattern of marginalization was encouraged by the missionaries who demonized most aspects of the medicinal cultural practice. This approach to traditional medicine is traceable to the modernization theory which emphasizes the evolution of society from primitive to a refined modern system.⁹⁹ It entails the transition of traditional society to a modern one. Hence, embers of tradition within a modern society are often ascribed a nuisance value. Traditional medicine has been on the receiving side of European domination and cultural imperialism.¹⁰⁰ Indeed, it has been noted that ‘the epistemological terrain upon which both indigenous and Western health professionals traverse is not level, resulting in a hierarchy of knowledge, as well as superficial dichotomies between the indigenous and Western health approaches’.¹⁰¹ Thus, globalization has impacted greatly on medical practices from one society to the other due to colonialism and its attendant suppression of indigenous cultures.

The contestation of biomedicine and traditional medicine seem to constitute one of the cold wars of the colonial period in the Global South. Similarly, in colonial Vietnam, attempts were made to eradicate indigenous medicine in favour of biomedical science. Traditional medicine was marginalized by colonial public health policies which favoured modern pharmaceuticals, biomedical facilities in the country.¹⁰² In South Africa, colonialism and apartheid stunted the growth of traditional medicine.¹⁰³ In Kenya, the introduction of modern health services witnessed cultural imperialism and the rapid marginalization of traditional medicine and medicinal plants – legal instruments such as the Witchcraft Act Chapter (Cap) 62 of 1962 was used to criminalize the practice of indigenous medicine.¹⁰⁴ Similarly, in colonial Lagos, attempts were made to eradicate indigenous medicine in favour of biomedical science. In this respect, traditional medicine was marginalized by colonial public health policies which favoured modern pharmaceuticals and biomedical facilities in the city. As observed by T. Adefolaju, ‘the rejection and derision of the indigenous healing practice has

continued till present time, leading to government's unwillingness to recognize and harmonize it with the global system of health care delivery'.¹⁰⁵

The Eurocentric rhetoric of the supremacy of 'white medicine' in healing 'African diseases' was institutionalized in public health system as an embodiment of the new urban planning. This approach depicts the African local response to medical and environmental challenges such as illness and epidemics as dangerous, mythological, unreasonable and ineffectual.¹⁰⁶ This entails the demonizing of traditional medicine by associating its practice with witchcraft. In 1941, the Union of Ifa Priests of Nigeria drew the attention of the Governor of the colony to a broadcast by Dr. Kofoworola Abayomi the substance of which was published in the *West African Pilot* of 23 July 1941 which likened traditional medicine to witchcraft. The native doctors contested Kofoworola's perspective that most deaths occurring from tuberculosis and typhoid are products of ethnomedical intervention.¹⁰⁷ The native doctors argued that other practices which undermined the confidence of ethnomedical practice include the undignified manner of handling the corpses of patients treated by the traditionalists.¹⁰⁸ The native doctors affirm their legal standing to practice under section 26 of the Medical Practitioners and Dentists Ordinance No. 20 of 1934, chapter 40 of the laws of Nigeria which made provision for the practice of native system of medical therapy.¹⁰⁹ Further still, the ethnomedical practitioners' affirmed their willingness to cooperate with the government in improving public health along these lines:

It is our declared policy to cooperate with the government in improving the health of the people vide section 23 of constitution, we desire that facilities be given us to have the services of the Government Analyst in helping to examine and certify our improved Native medicines and thereby remove the probable misapprehension of efficacies and purities of our drugs. In this connexion, we quote hereunder similar facility granted to a member of the Nigerian Herbal medicine supply and co., in the year 1917. It reads...analyst report, chemical laboratory, Yaba, 19th Feb. 1917. "This is to certify that I have examined a sample of a native medicine labelled "Agbomaseh"

No.1, a preparation of the Nigerian Herbal Medicine Supply Co. received from Mr. Ojo Cole on the 16th instant for analysis. I find it to be prepared from vegetable products only and free from mineral and common Alkaloid poisons. I consider it to be harmless and probably beneficial if used according to the directions of the label. Sgt. W. Ralstob. Bsc. (Lond), F.L.C. Analyst.¹¹⁰

In essence, the government permits the unofficial practice of ethno-medicine in as much as it did not constitute nuisance or conflicted with biomedical healthcare. This position is affirmed in the case of an herbalist who applied to the commissioner of the colony Lagos, for a license in order to legally practice the healing of internal worms and bad eye.¹¹¹ The commissioner replied that no licence can be issued except in accordance with the Medical Practitioners and Dentists Ordinance and at the same time the section 22 of that Ordinance ensures that there is ‘no impediment to your supplying herbal, or native preparations not being poisons and which herbal and native preparations are used in Nigeria’ provided the herbalist did not deal in other drugs.¹¹² However, there are cases in which ethno-medicine was misinterpreted as the culprit fostering the spread of epidemic diseases. This is especially true in the case of Smallpox. For instance, in a correspondence between the natives of Ibeahe Town in Badagry and the Commissioner of the Colony, Lagos on 5 January, 1946, the natives had complained of a raid by the police in conjunction with Sanitary Inspectors on neighbouring villages of Igbologun and Awuwo involving the seizure of the paraphernalia of the worshippers of *Sopona* (small pox), native healing medicines and other gods worshipped by the people.¹¹³ Similarly, the colonial Government had ordered the prosecution of *Soponna* worshippers in Apapa in 1945.¹¹⁴

The stereo-type of ethno-medical inferiority has been upheld by scholars who have sought to link this ethnocentric agenda with the cultural history of Africa.¹¹⁵ In such studies, the explanation of illness in African societies has been seen as a function of a dysfunctional

culture. Having discovered the limitations of implanting this stereotype in public health through British medical and sanitary practitioners, the colonial government employed the services of educated African elites as Medical and Sanitary Officers. Assimilated in the modernization ideologies and concerned with the need to carve a niche for themselves in the colonial public health system, the educated African elites became the machinery of the British colonial government in the informalization of ethno-medicine in Lagos.

This pattern of ‘medicinal imperialism’ has transcended the colonial into the post-colonial era in Lagos. This has been facilitated by western trained elites who continued to emphasize the superiority of biomedicine over ethnomedicine without a subjective evaluation of the curative potency of the later. Indeed, an unexplored area in the study of Plague in Lagos is the ethno-medical interventions that greeted the outbreak between 1924 and 1931. Indeed, the ethnographic survey carried out has shown (in the previous chapter) how the application of ethno-pharmacology and remedies involving *imiesu* (*Ageratum Conyzoides*) and *Eyilata* (*Biden Pilosa*) had probably helped among other measures contain the Plague outbreak.¹¹⁶ Despite its subjectivity, the colonial documents show that the home of traditional healers was the first point of call for many Plague infected Lagosians during the saga.¹¹⁷ This raises critical questions about the accuracy of the official morbidity and mortality figures of the colonial administration. While this thesis did not set out to address the laboratory efficacy of traditional medicine on the Plague bacillus, it however, opens up a new dialogue on the need for the decolonization of public health system in Lagos and West Africa in general in order to harness the potentiality of cultural cum natural endowment of the region in the face of emerging transborder epidemic diseases like Ebola.

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CHAPTER SIX

SUMMARY AND CONCLUSION

This thesis examines the history of Bubonic Plague in Lagos from 1924 to 1959. It analyses the peculiarity of Plague in Lagos against the background of the globalization of disease environment owing to colonialism and European imperialism. The historical reconstruction of this phenomenon is rooted in the series of Plague pandemics that crossed political, socioeconomic and cultural boundaries since the medieval era. This includes the Plague of Justinian (541 – 850 AD), The Black Death (1347-1351), and the Third Plague Pandemic (1855-1959). The Third Plague Pandemic evolved in China where it spread around the World to places including West Africa through increased contact between diverse peoples and places. This epidemic pattern trails the landmark of colonialism around the world – from the outbreak of major epidemics that characterized European conquest of the American Indian society to a major outbreak of Plague in French Grand Bassam (now Ivory Coast) in 1899 following the European conquest of West Africa. The Plague in Lagos is discussed as a distinct case within the Third Plague Pandemic.

While endemic diseases in pre-colonial Lagos were contained within the historical traditions of local interventions and natural mutations especially in the cases of malaria, dysentery, diarrhoea, typhoid, smallpox and gonorrhoea, the epidemic Plague of 1924 to 1931 was unprecedented in the port city. On the other hand, European migrants encountered endemic diseases like malaria and yellow fever in West Africa with attendant high mortality which relegated their influence to the coastal trading forts up to the first half of the nineteenth century. The second half of the nineteenth century witnessed European adaptation to West African disease environment through improved knowledge of biomedicine as well as the strategic segregation of the native spatial enclave as a quarantine measure. By the first quarter of the twentieth century, improved transportation

technology, urbanization and rapid population growth ensured steady interactions between European migrants and native Africans as well as rapid transborder flows in the British West Africa and globally.

It has been observed that globalization and colonialism impacted Lagos disease environment in the first quarter of the twentieth century. This is a case of unprecedented epidemic transmissions through communication networks as exemplified by the Influenza pandemic of 1918-19 and the Plague outbreak from 1924-1931. Indeed, the Plague in Lagos has been traced to the international Kolanut trade with Kumasi in the Gold Coast (now Ghana). This is essentially as a result of the transporting infected persons, rodents and contaminated cargoes. The official index case of Plague infection was diagnosed in Lagos on 28 July 1924. Prior to this time other informal cases had occurred which are wrongly diagnosed as Pneumonia. These informal outbreaks have been traced to the sudden death of an international kola nut trader named Momo Bogobiri. Subsequently, the disease rapidly spread across Lagos accounting for a total of 1,947 cases and 1,813 fatalities by 1931. The study noted that this is essentially an official statistics of Plague as archival and ethnographic evidence suggests a high incidence of unreported morbidity and mortality due to the fear of quarantine as well as ethno-medical interventions.

Plague being a zoonotic infectious disease, spread through rodents to human population. The Plague bacillus survives and flourishes in mild temperate or humid conditions. In the tropics, this is a climatic variation of a temperature range in between 15 and 28 degree centigrade. This was the case in Lagos between 1924 and 1931. The rapid immigration following the post First World War economic boom in Lagos with its attendant overcrowding created conducive environment for the domestication of the Plague pathogen imported from Kumasi in the Gold Coast (now Ghana). The cruel

manifestation of the Plague infection characterized by fever, headache, traumatic pain, buboes (boils) with a case-fatality rate of 94.02% ensured panic and the fear of contagion as many local residents of areas like Oko Awo, Elegbata, Idumagbo, Sandgrouse, and Anikantamo fled to other places in Lagos. This scenario was compounded by the limitation of biomedicine in the port city due to inadequate medical practitioners, facilities, as well as cultural barriers of invasive etiological approaches. In the face of this debacle, most of the natives sought preventive and curative refuge in ethno-medicine. Hence, the homes of native doctors became the first point of call for many of the infected and their contacts. The epidemic control measures of the colonial government and local responses were germane in the making of historical landmarks that exemplifies socioeconomic, cultural, political and spatial change in Lagos.

The Bubonic Plague epidemic in colonial Lagos was a landmark in the history of disease processes in the port city. While an earlier pandemic of Influenza was spread to Lagos between 1918 and 1919, it had lesser historical consequences. The Plague of Lagos witnessed the endurance of a newly introduced infectious disease from 1924 to 1931. The outstanding nature of the epidemic called for extra-ordinary measures to abate its virulence. These measures which include transborder epidemic surveillance, quarantining and sanitary measures, town-planning, bio-medical and religious interventions influenced socioeconomic, cultural, political and spatial change in the society over time.

Despite the transmission of the epidemic through sea trade in the British West Africa and the scientific understanding of its etiology, the social reconstruction of Plague by the colonial administrators holds the native ‘unhygienic’ culture responsible for its outbreak. Thus, Plague control measures were centred on the perceived taming of the ‘inherently unhygienic Lagosians living in slum settlements. While colonial interventions were

belated, the implementation bordered on racial discrimination, segregation and social inequality geared towards safeguarding the imperial capital in the colony. The immediate measure adopted involved disinfestation of suspected Plague infested houses and quarantining of suspected victims. In the long run, this approach graduated to the demolition of buildings and ultimately slum clearance. This tendency in public health seems to have been shared around the world. This was the case in India and South Africa where the locals were perceived as Plague carriers due to the stereotype of Africans and Indians as unhygienic races. This was a trend in which epidemics were seen as a product of the less privileged of colonial societies based on deterministic approach to justify colonial rule as a civilizing mission through public health theories that berates the culture of the colonized.

Sanitary inspection and screening of travellers and commuters in Lagos showcases the social disparities in the face of preferences given to European migrants. In fact, this scenario and especially the inhuman treatment of Africans in nodes of transport networks were adjudged by the Lagos Chamber of Commerce to have had negative impact on internal trade in food stuffs in 1925. While there were no significant opposition to racial segregation of the built environment and biomedicine, ethno-medical consultation was widespread among Lagosians. In essence, European colonization and its attendant propagation of biomedicine and global pandemics challenge African traditional medicine in a race against a newly introduced epidemic disease. The epidemic shock brought about by Plague in colonial Lagos and the attendant new methods of colonial diseases control instigated local responses that found expression in medication preferences, migratory flows, trade, and the socio-spatial dynamics of the society.

Despite the discovery and the treatment of the earliest cases of Plague by traditional healers in the city, the colonial archive is lacking in the holistic documentation of this important perspective of Plague control. Thus, the historical reconstruction of religious intervention enriches our understanding of the indigenous alternatives to orthodox methods of epidemic control. This is particularly justified in the face of official case-fatality rate of 94.02%. The consultation with divination before prescription of ethno-pharmacological remedies impact the patients psychologically by allaying the fear of metaphysical interference. The ethno-medical remedies prepared with natural pharmacological elements such as *imiesu* (*Ageratum Conyzoides*) and *Eyilata* (*Biden Pilosa*) are broad ranged accessible remedies. These local responses allegedly helped amidst other measures in containing the epidemic outbreak.

Lagos struggle against Plague unveils the impact of intercultural encounters on social equity, the values of indigenous knowledge system, and the lessons of an export focused colonial administration in epidemic control. Indeed, the epidemic shock, colonial interventions and local responses provide a testing ground for the evaluation of societal structure and potentials for historical progress. The epidemic stimulated actions towards improved environmental health amidst public health policies that instituted inequality at socio-spatial level in Lagos.

While population loss and disease transmission led to labour loss, sustained immigration cushioned the effects in the area of labour productivity. Plague control involved employment of more hands in the colonial medical and sanitary services. The anti-Plague campaign characterised by transborder disease surveillance, quarantining, derrating and environmental health related public works were dent on the colonial revenue. The fear of Plague and harsh quarantine measures impact food security in Lagos

from 1924 to 1931. However, the export focused colonial economy was sustained in the face of Plague virulence. This was made possible through liberal economic policies that discouraged transborder trade barriers, but rather encouraged a preferential quarantine and disinfestation measures targeted at exporters of primary produce. This sanitary and fiscal measures sustained export trade flows and the colonial revenue base during the outbreak and at the inception of the global depression of the 1930s. The sustenance of colonial export and import trade despite challenges emanating from Plague virulence provides a blue print for transborder epidemic control in the contemporary.

The social concept of causation adopted unveils the historiography of disease processes in colonial Lagos. It particularly unveils the public health impact of societal transformation in colonial Lagos. This thesis based on historical evidence has shown how societal transformations through the agency of colonialism and modernism had led to the onslaught of epidemic diseases like Plague in Lagos due essentially to racial segregation and neglect. The lessons of Plague control especially in the area of transborder disease surveillance are relevant to the contemporary fight against emerging infectious disease such as Ebola. The Plague in Lagos shows that epidemic control often reflects the social stratification of society. In essence, fighting epidemics creates a platform for the negotiation of power between the colonizer and the colonized. This was obvious in the nexus between colonial interventions and local responses to Plague outbreak. The outcome of the foregoing is exemplified by the unequal socio-spatial remaking of the city characterized by urban planning that received an impetus from 1931 to 1959. This witnessed the legalization of socio-spatial delineation of societal living between the elites and the commoners – a landscape of inequality that survived into the contemporary.

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(B.) ORAL INTERVIEWS

S/N0	Name	Address	Occupation	Age	Dated Interview
1	Adeleke Olajumoke	Ikeja, Lagos	Formerly Teacher	68	01/12/2015
2	Aboderin Olusegun	Obalende, Lagos	Herbalist	97	12/09/2016
3	Adigun Akinwale	Idumota, Lagos	Formerly, Sanitary Inspector	98	14/09/2016
4	Agbebi Elizabeth	Agege, Lagos	Formerly Trader	82	13/11/2015
5	Bello Olaide	Ebute Metta, Lagos	Formerly Police Officer	98	11/01/2016
6	Faleti Kola	Obalende, Lagos	Traditional Healer	84	12/09/2016
7	Falola Damilola	Obalende, Lagos	Formerly Trader	96	12/09/2016
8	Madam Ige Olabisi	Surulere, Lagos	Formerly Trader	94	12/01/2016
9	Kekere Ramat	Idumagbo, Lagos	Formerly Trader	93	16/12/2016
10	Kolawole Bidemi	Ebute Metta, Lagos	Formerly Trader	99	11/01/2016
11	Laguda Comfort	Idumota, Lagos	Formerly Tailor	95	17/12/2016
12	Odugbemi Adekola	Agege	Traditional Healer	87	20/11/2015
13	Odukoya Olurinde	Idumota, Lagos	Herbalist	95	03/09/2016
14	Ogunyemi Gbenga	Ikeja, Lagos	Formerly	77	02/12/2015

			Sanitary Inspector		
15	Ogunseye Olusola	Obalende, Lagos	Formerly Trader	92	13/09/2016
16	Ogunsola Olutayo	Surulere, Lagos	Formerly Tailor	89	11/01/2016
17	Oladehinde Paul	Iddo, Lagos	Formerly Carpenter	95	14/08/2016
18	Olukoya Oladosu	Ebute Metta, Lagos	Formerly Road Transporter	96	10/01/2016
19	Omotosho John	Obalende, Lagos	Formerly Fisherman	95	17/12/2016
20	Ojo Taiwo	Surulere, Lagos	Formerly Trader	91	11/01/2016
21	Seweje Adebayo	Yaba	Traditional Healer	89	6/11/2015

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APPENDICES

Appendix A

1073

May 27, 1904

Report from Calcutta.

Passed Assistant Surgeon Sprague reports, April 28, as follows:
I have the honor to report that during the week ended April 23, 1904, bill of health was issued to steamship *Nuenfels*, bound for Boston and New York, with a total crew of 64. The effects of 38 Lascars were disinfected, and the usual precautions were taken to kill rats and later prevent their entrance into ship.

Decline in plague.

During the week ended April 23, 1904, the number of deaths from plague fell to 440, and the last daily report obtainable showed 35 deaths. The decline is progressing with little, if any, interruption. While the number of deaths from cholera has fallen to 102, the disease is still considered epidemic. It is, however, confined to the native population.

ITALY.

Report from Naples—Inspection of vessels—Bovine plague in Egypt—Plague in the Transvaal.

Passed Assistant Surgeon Eager reports, May 9, as follows: During the week ended May 7, 1904, the following ships were inspected at Naples and Palermo:

NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of large baggage inspected and passed.	Pieces of baggage disinfected.	Number of steerage passengers recommended for rejection.
May 1	Palatia.....	New York.....	1,661	300	1,479	14
2	Il Piemonte.....	do.....	538	45	715	12
4	Citta di Napoli.....	do.....	899	120	1,125	37
5	Patria.....	do.....	555	75	840	9
6	Grosser Kurfurst.....	do.....				
6	König Albert.....	do.....	1,425	290	1,756	11

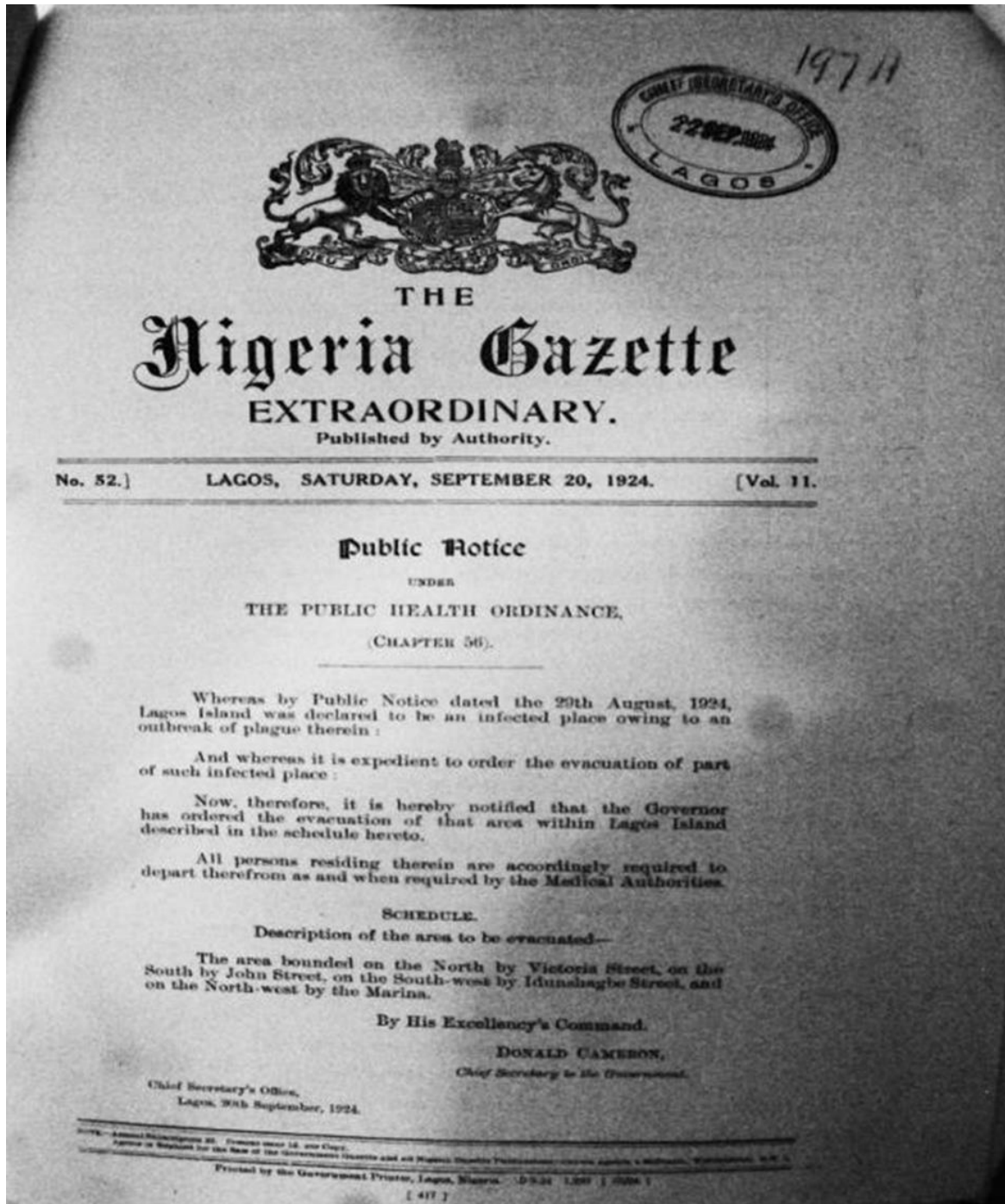
Bovine plague in Egypt.

In addition to bubonic plague it is reported that bovine plague is very widespread in Egypt. Severe precautionary measures are being taken, but owing to the nomadic character of the population the results, it is said, are unsatisfactory as far as the cattle disease is concerned. According to reports Egypt is also menaced this year with an invasion of locusts. In certain districts the government has ordered the destruction of the eggs left by the clouds of these insects that have already made their visitation. Under the direction of experts sent out by the ministry of the interior almost the entire population of some sections of Egypt is engaged in destroying the eggs.

Bubonic plague in Transvaal.

Telegraphic reports from Johannesburg state that 2 cases of bubonic plague were verified May 5 in the center of the city. The central market of Johannesburg has been quarantined.

Appendix B



Appendix C





Appendix D

