Review Article

iMedPub Journals
www.imedpub.com

Journal of Preventive Medicine
ISSN 2572-5483

2018
Vol.3 No.1:4

DOI: 10.21767/2572-5483.100025

Colonialism and Public Health: The Case of the Rinderpest Virus in Oromia Regional State in Ethiopia

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Citation: Dugassa BF (2018) Colonialism and Public Health: The Case of the Rinderpest Virus in Oromia Regional State in Ethiopia. J Prev Med. Vol.3 No.1:4

Abstract

Background: Colonizers usually present their agenda in positive terms–theirs is a civilizing mission and they pretend to be healers. For the colonized people, on the other hand, colonialism represents poverty and disease or at least disease-causing agents. In Oromia, the rinderpest virus (RPV) epidemic is one of the pathways by which colonialism and racist mindsets caused famine, poverty, diseases and millions of deaths.

Objective: The objective of this paper is to learn from the past, envision a better future by preventing infectious diseases, diversify the economy, develop public health institutions, promote healthy public policy and guarantee food security.

Methods: In this paper, using documents and oral narrative analyses, I explore the origin of RPV and its impacts on human lives and natural environments in Oromia.

Findings: In 1887, the Italian army stationed in Massawa-the Red Sea port had brought cattle infected with RPV. The Abyssinian army seized the cattle and unwittingly introduced this infectious disease to the highlands of the present state of Eritrea. In the 1880s, Abyssinia- supported by the European empire builders was expanding its colonial territories and in the process annexed Oromia and introduced RPV. RPV epidemics, compounded with the Abyssinian colonial war and widespread looting, caused famine in Oromia and accounted for the deaths of two-thirds of the Oromo people.

Conclusion: The RPV epidemic made the Oromo people easily succumb to Abyssinian rule and hindered their aspirations to rebel against the siege. RPV persisted in Oromia for over 120 years and severely harmed Oromo social, cultural and political institutions. Public health students and policy makers need to learn from the past and oppose all forms of racist views and promote social justice as a means of granting better public health.

Keywords: Rinderpest virus (RPV); Infectious diseases; Oral narrative analyses; Epidemics; Public health

Received: November 03, 2017; **Accepted:** January 19, 2018; **Published:** January 27, 2018

Introduction

Healthy and prosperous societies do not arise on their own. They are the result of thoughtful decisions. They are created by design and by understanding the past and envisioning a better future [1]. When the Institute of Medicine [2] defined public health as "the science and art of preventing disease, prolonging life and promoting health through organized efforts of society", it highlighted the key role of the state in monitoring and creating healthy social conditions i.e. social protection and care. The definition was notably built on Virchow's often quoted statement "medicine is a social science, and politics is nothing else than medicine on a larger scale" [3]. In other words, our health is determined by the social conditions in which we live and work. Markedly it reveals social justice is the foundation of public health [4].

European colonial policy and the mobility of goods and the military have contributed to the spread of diseases worldwide. One of the horror stories I heard from the Oromo elders that were beyond my imagination to comprehend was a disease that had followed the arrival of Abyssinian colonial forces. It was a cattle plague previously unknown to the region that massively killed cattle and caused famine. The famine caused devastation to human life and the environment and created immerses social problems. This historical event is recorded in the collective memory of the Oromo people as "Bara Nama Nyataa" –the Period of Human Eater, "Bara Rukkisa"- the period of extreme famine and as "Ciina" –the period of termination [5].

Around fireplaces, Oromo elders usually talked to children about their experiences and the experiences of their ancestors. Some of these stories were about the survival strategies used during the rinderpest virus (RPV) epidemic, and others included the ways the need for food conditioned people to break cultural norms. In one story, elders ask "what is the scariest phenomenon"? The Oromo narrative suggests that starvation makes people have uncontrollable urges to seek food and this makes starvation and the need for food scarier than even death. One of the stories was about a group of young men who sacrificed their lives on the hands of the Abyssinian army one after the other in the defense of their food. This story provoked my imagination and influenced me to study what the Oromo people suffered. In one of my graduate courses I wrote a paper on the biology of starvation. In writing the paper, I came across the famous "Minnesota Great Starvation Experiment of 1944-45" [6], which indeed proves that the Oromo oral story was fairly accurate. The experiment proves that starvation makes people have uncontrollable urges for food.

The Oromo people's experience about the RPV epidemic is not adequately documented. Until my adulthood, I took the stories I heard from elders as legend. Information can be knowledge if it is seen in the proper context. The oral information that the Oromo elders provided to the children around the fireplace became knowledge when critical thinking and evaluation were applied to it and its validity tested. Although it is part of the Oromo oral story, the ways in which RPV emerged, its social, economic, political, cultural and environmental impacts, are under discussed in Oromo written literature. To change this, I started enquiring into this topic in my Ph.D. dissertation [7]. In this paper, I ask several questions and make efforts to answer them. The first set of questions was about the disease: what was the disease that had massively killed Oromo cattle? Was it a new infectious disease or an old one? If it was new, how did it emerge? Who was responsible for the introduction of the infection in Oromia? What were the social, economic, political, cultural and environmental impacts of rinderpest virus in Oromia? The second set of questions has to do with whether the Oromos would have been able to contain the epidemic if they were an independent people? Could they have minimized the impacts of the epidemic and recovered faster from the devastation, if they had been an independent people?

In human history, colonial war and diseases have been always directly connected. Epidemics have contributed to the rise of empires and/or their demise. Historical evidence shows that repeated rinderpest plagues greatly weakened the Roman Empire and created favorable conditions for the rebirth of sovereign states in Europe [8]. This means RPV epidemics contributed to the demise of an empire and contributed to the birth of sovereign states. In countries like Oromia that are heavily dependent on cattle for meat, milk and draft power to plow farmland, RPV epidemics can cause famine and inflict serious economic and political damage. As we can see in detail in Oromia, the RPV epidemic caused the worst catastrophe ever recorded in the Oromo collective memory.

Although RPV epidemics have been critical events in Oromo history, their social, economic, cultural, political and environmental effects have not been subjected to scholarly analyses. This history of RPV epidemics needs to be fully understood as one of the forces that have shaped the Oromo colonial experience. During Oromia's period of colonization, RPV epidemics massively killed cattle, caused famine and decimated the population [9,10]. In addition, RPV epidemics incapacitated the Oromo people socially, economically, politically, culturally, and environmentally and conditioned them to easily fall under Abyssinian colonial rule.

As said earlier, colonizers present their agendas in positive terms–civilizing, "healing" missions. For the colonized people colonialism represents poverty and diseases. In this paper, I first closely look at the etiology of rinderpest virus. In the second part, I make efforts to trace the ways RPV was introduced to Oromia and caused famines. In the third part, I look at the ways the colonial agenda and racist mindset interacted to introduce the RPV epidemics. In the last part, I examine the ways the colonial agenda and colonial policies aggravated the epidemic and provide conclusions.

Objectives

From a public health perspective, history offers dual functions: It enables public health students to understand the social and health problems of past societies while increasing their understanding of the present. Understanding history is making observations about the health of a population over a substantial period of time; this makes it a pre-requisite for the evaluation of progress, or lack of it, in improving population health [1]. Hence, studying the impact of the RPV epidemic is instrumental in understanding the relationships between colonialism and public health. Clearly understanding these relationships will foster preparedness with regard to controlling future infectious diseases, diversifying the economy, guaranteeing food security and promoting healthy social policies. The major objective is learning from the past, envisioning a better future, preventing infectious and chronic diseases, diversifying the economy, developing public health institutions, promoting health and guaranteeing food security. The secondary objective is revisiting history and analyzing the impacts of the colonial agenda, the colonial social policies and promoting the development of strategies that enable people and widen their choices in life.

The Political Economy of the Horn of Africa (1880-1910)

To examine the impacts of RPV epidemics in Oromia and in neighboring regions, we need to closely look at the political economy of the Horn of Africa from 1887 to 1910. In the 1880s, most of the people in the Horn of Africa were dependent on cattle. However, their dependency varied from one group to another and their risks and survival rates significantly differed.

In 1880s, half of the Oromo people were settled agriculturalists and the rest were pastoralists. Settled agriculturalists generated half of their income from crops and vegetable farming and the rest from animal rearing. For the pastoralists, most of their income came from cattle rearing. Overall, for most of the Oromo people their economy was dependent on agriculture (rearing different types of domestic animals i.e. cattle, goats, sheep, horses, donkeys and growing crops). Cattle provided foods (meat and milk) as well as the oxen used to plow land. The skins of cattle were used to make clothes, pillows and rags. The skins were also used to make sacks to store or transport grain and other products. The horns were used to make cups and the hooves used to make spoons and flutes. Cattle manure was used as fertilizer to produce better crops. As the Oromo people usually describe cattle "there is nothing to throw of cattle". Next to cattle the Oromo people widely used goats and sheep for meat and skin production. Oromo people used horses, donkeys and mules as the means of transportation.

Oromo people used cattle as a currency in buying, selling and in gift exchanging. Cattle were used to give rewards or to pay penalties. For example, when a young man was ready to marry, the parents gave cattle to the family of the girl as dowry. The family members of the girl and the man also gave cattle as gifts to help the young couple start their family life. In 1887, the major sources of income for the Oromo people were generated from cattle breeding and crop cultivation was secondary. Given that the Oromo people had been using oxen to plow the lands; in the absence of cattle they could not produce enough crops.

Although Abyssinians (Amhara and Tigray people) were dependent on cattle, their dependency was relatively less than it was the case among the Oromo people. When the RPV epidemic started, all Abyssinians were settled agriculturalists and they were more dependent on crop farming. Their primary dependency on crop farming helped them survive better in the epidemic. In addition, at that time many Abyssinians were armed and controlled most of the current Ethiopian empire. Abyssinians used their guns and political power to their advantage. The Abyssinian army massively looted food and cattle from Oromia and other regions and sent them to their homeland [11]. The Abyssinian king Menelik, authorized his army to settle in different parts of Oromia and forced the local people to provide food and shelter for the settlers [7].

In 1880, most of the Afar and Somali people were nomadic and most of their income was generated from rearing animals i.e. cattle, camels and goats. During the RPV epidemic, their limited crop production put them at a higher risk. However, camels are resistant to RPV and this provided the Afar and Somali people a survival advantage. The Afar and Somali lands were located in lowland and malaria prone zones. The geographical proximity from Abyssinia and the hot climate worked as a barrier in hindering the mobility of the Abyssinian army and correspondingly minimized the looting as well as making the transmission of RPV infection slower.

Colonialism and Public Health

Colonialism is a process whereby the empire builders claim sovereignty over the land and the people of the other country. Very often contacts between colonizers and the colonized led to the introduction of new diseases; sometimes it takes away the social protections and cares and created social conditions for local epidemics and made them extraordinarily virulent. This was evident in the case of sleeping sickness in Africa [12].

What do we know about colonialists using infections against the colonized people? Historical evidence shows that using disease agents in military battles is as old as human conflict. One of the earliest records of using biological agents against the enemy were the Tatars. When the Tatar-Mongolians besieged Kaffa (now Feodossia in Crimea, the land recently annexed by Russia from Ukraine) in 1346 they experienced an epidemic plague. The Tatars converted their misfortune into an opportunity and used the infection as a biological weapon and initiated plague into the city they planned to capture. The outbreak of the plague in the city caused the residents to flee. Some of those who fled were already infected and unwittingly carried the disease to the rest of Europe [13].

In human history it is well known that fighting groups made efforts to use infectious diseases as biological weapons to kill or weaken their opponents. In several cases empire builders have deliberately used biological agents against the colonized people [13,14]. Historical records also show that once the European colonists discovered that indigenous populations were not immune to certain diseases they made efforts to further spread the diseases in order to gain military advantage and incapacitate and subjugate the local peoples. Even without knowing the exact causes of a disease and the mechanisms it affects, military leaders have infected the enemy and gained the military advantage. In the French-Indian war in North America in 1763, the French forces sent smallpox-wrapped blankets and handkerchiefs to the indigenous people. The colonizers deliberately introduced smallpox to indigenous people to reduce their numbers. The French-British colonial forces used handkerchiefs and blankets as Trojan Horses to transmit smallpox to settlements of indigenous people in areas usually hard to reach causing smallpox epidemics and mass death [13]. These strategies worked because the smallpox virus can survive for a long time on cloth, and fleas would have deserted the dead bodies to search for living hosts and thus spread the plague. Historical record shows that smallpox killed significant members of indigenous people in the Western hemisphere [15].

Indeed, the history of the European colonization of North America is a harrowing tale of the decimation of the indigenous

population by infectious disease, warfare, and the active suppression of culture and identity [16,17]. In some cases, the colonizers neglected the social problems of the colonized people and allowed epidemics to run their course. For example, in Ireland, British colonial forces made no effort to intervene when the potato fungus damaged the potato crops on which the Irish were dependent and caused famine. As the Irish starved to death, the British said "the judgment of God sent calamity to teach the Irish a lesson" [18]. This made the Irish people abandon their farms and migrate. The Irish migration freed up the land for commercial farming. In doing that, the colonizers incapacitated the colonized people and built up their own colonial power.

The European colonizers were responsible for the introduction of new diseases into places where they had never been before thereby causing high mortality and morbidity among the colonized people. For example, when the Netherlands and the U.S.A. colonized Indonesia and the Philippines respectively, in the 1870s and 1880s, they introduced RPV. The epidemics caused up to 90% cattle losses. Although both colonizers were quick to establish veterinary departments, it took over 30 years to fully contain the disease [19].

Until the socio-biological causes and the pathways of infectious diseases were clearly understood, all plagues were seen as the work of a divine power. Those who were affected by the disease were seen as sinners. If an empire was built as a result of the epidemic, the colonizers said the plagues were sent by a divine power that helped them come out as victorious. Empire builders said the divine power used epidemics to remove the people who were obstacles to the colonial agenda i.e. settlement and cultivation. Such a discourse has two major dreadful colonial ideas. The first idea sword is the discourse informed the colonizers that a divine power allowed them to exploit, kill and dehumanize the colonized people. This meant they were free from their moral duty and had no legal responsibility respecting the rights of others. The second idea is the discourse that informed the colonized people that their misery is the will of a divine power. This informed the colonized people that their own divine power was inferior to that of the colonizers. It also says to the colonized people that the colonial social structures created by the colonial conquest and the social conditions were natural and inevitable.

Although infectious diseases are caused by natural biological agents, they are spread when favorable social conditions are created. The privileges that the colonizers enjoyed usually gave them favorable social conditions and provided them with a survival advantage over the colonized people. The colonizers said this was the work of a divine power; rather than taking responsibility for their own secular actions, they blamed the victim. Historical records show that foreign animal disease outbreaks, whether naturally occurring or intentionally introduced, involving agricultural pathogens that destroy livestock, would have did have a profound impact on a country's infrastructure, economy, and export markets. Records show that the RPV was one of more than a dozen agents that the United States and former Soviet Union have researched with the possibility of using it as a biological weapon before both countries suspended their biological weapons program.

Rinderpest Virus

The term Rinderpest comes from German, and it means cattle-plague. RPV is a highly contagious and most lethal disease of cattle, buffalo and some species of wildlife. RPV is an infectious disease characterized by fever, oral erosions, diarrhea, lymphoid necrosis, and high mortality. The classical form of RPV is one of the most lethal diseases of cattle, and can have a catastrophic effect on native herds. This cattle plague occurred several times in Europe. In Medieval Europe, the infection was known to have accompanied wars and military campaigns. Death rates during these outbreaks were extremely high, approaching 100% in animals that had never been exposed to the virus. The RPV epidemic can inflict loss and destruction for several generations. Several historical sources clearly demonstrate RPV can be used or attempted to be used as biological agents against their enemy [19].

In most cases the incubation period for RPV ranges from 3 to 15 days. Records show that the virulence and incubation period are interdependent. Mild forms of the RPV can have a shorter incubation period. The World Organization for Animal Health has established a maximum incubation period of 21 days. Small amounts of RPV can be found in nasal and ocular secretions, saliva, milk, urine and feces beginning 1 to 2 days before the onset of fever [20]. Large amounts of RPV can be found in the animal's secretions and excretions (including nasal and ocular discharges, saliva, feces, milk, semen, vaginal discharges and urine), as well as expired air during the first week of clinical signs. However, virus shedding decreases as specific antibodies develop and the animal recovers. Blood and all tissues can be infectious before the clinical signs appear. This makes the mobility of cattle for trade and during war the major contributor to the RPV epidemics.

Transmission of RPV occurs through direct or close indirect contact with infected animals or discharges. One of the routes of transmission is through an aerosol. Aerosol transmission can occur at a very short distance. Although aerosol transmission seems small in the epidemiology of RPV, some sources suggest that it may be transmitted up to 100 m or more at night, when the humidity is very high. The oral ingestion of contaminated foods or water can transmit RPV. In addition, contact with fomites or contaminated objects like clothing and equipment can spread RPV. It also known that drinking water contaminated with the excretion of infected cattle spreads the infection. The RPV virus does not survive in the environment very long and there are no known vectors that transmit it. This means that the RPV does not persist in wild populations without the presence of susceptible cattle. Pigs can be infected if they ingest contaminated meat, and it can be transmitted to cattle. RPV can remain viable for at least a week in meat kept at 4°C (39°F) [20]. Infected animals do not become carriers; the virus maintains itself by passing from animal to animal in a large, susceptible population.

Morbidity and mortality rates of cattle vary with the strain of the virus, and the susceptibility and the immunity of the animals. In endemic regions, the morbidity rate is significantly low and the clinical signs are frequently mild. However, in animals that have never been exposed to the virus some of the strains can cause

morbidity and mortality rates up to 100% [19]. In Oromia, where people are dependent on cattle for meat, milk products and draft power to plow farmland, rinderpest can cause widespread famine and inflict serious economic and political damage.

Rinderpest virus and human history

As said earlier, it is well known that RPV epidemics were associated with war. RPV originated either from Central Asia or Mongolia, and was spread across Asia and Europe by the movement of animals associated with the armies of Genghis Khan. The regular occurrences of wars in Europe completed the cycle of infection across that continent with irregular outbreaks occurring in many countries through the trade in live cattle. RPV pandemics repeatedly occurred in the 18th Century. The first pandemic was extreme and affected the herds of Pope Clement XI in 1711 [21]. The impact of cattle deaths in Italy near Rome was so severe that Pope Clement instructed his physicians to take action to control the infection in his herds [21].

Historical evidence shows that RPV shaped human history in several ways. It has contributed to the collapse of empires, the expansion of colonial territories and instigate revolution. For example, in 1241/42, RPV helped the Mongolian king Genghis Khan easily conquer Europe. RPV led to the collapse of the Roman Empire [13,14]. When farmers experienced massive cattle losses to the rinderpest virus, they became impoverished. Trade was constantly disrupted because of the cattle plague; the economy suffered because goods could not be freely bought and sold. Heavy taxes were imposed upon the conquered people and this led people to resist the taxation. This resulted in the Roman Empire facing difficulties in collecting taxes and sustaining its institutions [22].

RPV is also implicated in several revolutions. The French Revolution was instigated by poverty and food insecurity caused by RPV. When the French farmers lost their cattle to RPV they faced unbearable poverty levels. The French ruling classes were not ready to acknowledge the needs of farmers or compromise their privileges; they insisted that farmers continue to pay higher taxes. This resulted in a mass uprising known as the French Revolution. The Russian Revolution is also connected to the RPV. RPV impoverished Russian farmers and others ruled by the Tsar. The poverty and food insecurity resulted from RPV led to the uprising of the people and was responsible for the Russian Revolution. In its turn the Russian Revolution led to the demise of the Tsarist monarchy and led to the formation of the United Soviet Socialist Republic (USSR). This means that RPV helped Russia to consolidate its empire. As I discuss later in detail, the RPV epidemic has contributed to the colonization and pacification of Oromia and the subjugation of East Africa [22].

RPV also widened human curiosity and instigated research. For centuries, people were curious about the mysterious disease that wiped out their cattle and led them to poverty. At the time, health and diseases were explained in terms of curses or sins or as if health/s were determined by a divine power. However, even powerful religious leaders i.e. churches, mosques and synagogues usually lost their cattle to RPV and this made it clear that the religious theory of health and disease did not explain the problem- or provide a workable solution. This contributed to the creation of veterinary colleges. The first veterinary school of medicine was opened in Lyons, France in 1762 [21]. The college was formed to better understand and contain RPV. Like many other professions, knowledge in veterinary medicine is socially constructed and it was the massive losses of cattle in France from RPV that led to the founding of a veterinary school and the training of veterinary personnel. It was in this college that many European countries trained their veterinarians.

Animals susceptible to Rinderpest virus

RPV can affect many domestic and wild animals. Susceptibility to RPV varies from one kind of animal to the other. Although most cloven-hooved animals are susceptible to RPV, there are some differences in their susceptibility. European cattle, zebu cattle, water buffalo, yaks, African buffalo, giraffes, warthogs and Tragelaphinae (spiral-horned antelope) are particularly susceptible. Wildebeest and yaks are moderately susceptible, and gazelles, sheep and goats are only mildly so. Asian breeds of pigs appear to be more susceptible than African or European breeds. RPV infection is extremely rare in camels, horses and donkeys.

The emergence of Rinderpest virus in Africa

RPV is one of the oldest animal diseases known. This epidemic spread through livestock trade, military invasions and colonial expansion. Records show that RPV entered Africa through two separate routes: Egypt and Abyssinia-Ethiopia. Egypt is the first African country that suffered from RPV [21]. The RPV epidemic brought devastation to Egypt in 1827, 1841, 1863 and then in 1883. The virus was believed to have been introduced to Egypt through infected cattle that either came from Southern Russia, Southern Europe or Asia Minor. The first wave of the epidemic caused the deaths of 665,000 cattle. Due to the natural climate barrier i.e. Nubian Desert, this wave of infection only reached northern Sudan.

The second wave of the RPV epidemic entered Abyssinia in 1885-1887, via the Italian colonial force stationed in Massawa–the present state of Eritrea [23,24]. In 1887, the cattle shipped from India or Arabia was infected with RPV that caused an epidemic that led Sub-Saharan African countries to experience disaster. The second wave of the RPV epidemic was one of the most virulent and its incubation period might have been 15 to 21 days. This virulent RPV initially devastated the Abyssinian cattle and caused famine. Within no time it was transferred to Oromia and step- by- step it brought devastation to cattle, wild animals and people in Sub-Saharan Africa. RPV swept from the Horn of Africa to West Africa to the Atlantic and south to the Cape of Good Hope. Records show approximately 95-100% of the cattle in sub-Saharan Africa died. Wild buffalo, giraffe and wildebeest populations were practically decimated. The loss of plow animals, herds and hunting resulted in mass starvation, killing a third of the human population in Ethiopia and two-thirds of the Maasai people [21]. The reduction in the number of grazing animals also allowed thickets to form in grasslands. These thickets provided

breeding grounds for tsetse flies, resulting in an outbreak of sleeping sickness in humans. The RPV epidemic is one of the most devastating outbreaks that colonial forces caused in sub-Saharan Africa.

Ethiopia

As has been noted, in 1887, the Italian army stationed in Massawa brought three cattle infected with RPV from India or Southern Arabia and introduced the RPV epidemics to Abyssinia [23,24]. Indeed, Abyssinians charge that the Italian colonial forces deliberately introduced the RPV to their country. The record shows that in 1885 Italy invaded Massawa the Abyssinian Red Sea port. Initially, the Italian army depended for their meat needs on the local market. The Italian army exchanged goods for cattle with the Abyssinian highlanders. The Abyssinian king Yohanis V, realized the Italian colonial motives and refused to let them trade with the highlanders. This caused the Italian army to buy cattle from elsewhere. Two years after the Italians captured Massawa, in 1887 the RPV entered this seaport town. The history of colonial public health policies clearly suggest that there were cases when colonizers used infectious diseases as biological tools.

The Abyssinian army invaded the Italian camp in Massawa and took the cattle and brought them to the highlands of Abyssinia-now Eritrea [23,24]. It is not clear whether or not the Abyssinians invaded the camp in resistance to the Italian occupation or purely to loot them. Whatever the reason might be, shortly afterwards RPV wiped out the Abyssinian cattle in all Abyssinian provinces and caused famine. A few years later, in 1889, the Abyssinian king Yohanis IV was killed in the war against the Turkish-Egyptian forces. The historical record suggests that Yohanis directly faced the enemy because his army was weakened by the famine.

A few months after the death of Yohanis IV, Italy and Abyssinia led by king Menelik II signed the Treaty of Wuchale. This treaty conceded parts of the Abyssinian territories (the present state of Eritrea) to Italy. In return, Italy promised Menelik financial assistance and military supplies. However, disagreements resulted from the interpretation of the treaty. The Italian-language version Article 17 of the treaty suggests that Ethiopia was obliged to do all its foreign relations through Italian authorities. This would make Ethiopia a colony of Italy. The Amharic version says that Ethiopia could use the offices of the Kingdom of Italy in its efforts to establish foreign relations. As a result, king Menelik II renounced the treaty and this led to the 1896 Adwa War. It seems that the Treaty of Wuchale was made out of desperation. The Adwa war started nine years after the RPV epidemic started. For this reason Abyssinians strongly believed that Italians introduced RPV into Abyssinia to weaken them.

We have no evidence that the Italians had deliberately introduced RPV into Abyssinia. However, the colonial public health history made clear that the colonizers knowingly and wittingly neglected the needs of the colonized people and this is evident in the case of RPV in Ethiopia. Record shows two years after the RPV started, when Ethiopia conceded the present state of Eritrea to Italia, the Italian government sent veterinary doctors to Eritrea[1] and in 1903 they opened the veterinary clinic in Asmara [25]. As we know today, the practice of quarantine began in Italy during the 14th century. It was started in an effort to protect coastal cities from plague epidemics [26]. Italy and many European countries practiced quarantining[2] for example in 1377, the great council of Ragusa in southern Italy passed a law establishing a Trentino, or thirty-day isolation period [27]. This made Italy the first in Europe to organize institutional responses to disease control that began during the plague epidemic of 1347–1352. Ships arriving in Italian ports were required to sit at anchor for 40 days before landing. Although the Italians had practiced quarantining ships arriving in their ports ever since the 14th century (1347–1352), when they brought the infected cattle to the Red Sea coast they did not take the necessary quarantine steps and caused the RPV epidemic.

Whether or not it was deliberate, the Italian army introduced the deadly RPV infection to Africa. Carried by just three infected cows, RPV spread from Ethiopia's east coast across the Sahel Desert, killing in just one year 90 to 95 percent of the domesticated cattle, plus countless wild buffalo, giraffe and antelope. RPV swept from the Horn of Africa west to the Atlantic and south to the Cape of Good Hope. Ethiopia lost 95% of its cattle and most of the human population starved to death. According to Yilma[3] [28], 30 to 60 percent of Ethiopia's population starved to death that year. Records show that during the famine the Bethe-Israelis – the Ethiopia Jews- migrated to different parts of Abyssinia, Benshangul and Oromia i.e. Macha and Dara. The famine and migration caused the breakdown of their social institutions and this caused them to convert to Christianity [29].

The magnitude of the deaths resulting from famine varied in different communities. The magnitude of the problem was more common and severe among the pastoralist communities rather than agricultural ones. Eritrean oral history recorded this event as ዘመነፈራ (stinky era) implying that a lot of people and animals died and few able people were left to bury the corpses. This made villages stinky. The Amhara oral story presented the event as ኪኾ ቄን=awful days. For example, the rinderpest epidemic which resulted in the mass deaths of cattle and people was registered in the Amharic creative writing as wax and gold[4]as follows:

ሞጣ ቀራንዮ ምነው አይታረስ

ደምበጫ ደብረ ወርቅ ምነው አይታረስ

በሬ ሳላይ መጣሁ ከዚያ እስከዚህ ድረስ

English translation:

[1] At that time the Ethiopian government conceded the present state of Eritrea to Italy.

[2] The word quarantine comes from the Italian words quaranta giorni-which means 40 days.

[3] Yilma, Tilahun is an Ethiopian-American, who have contributed a major role in the development of rinderpest vaccine that can easily applicable to the hot climate of Africa.

[4] In the wax and gold writing, the authors make one of the sentences give two or more meanings.

Why was land in Mota and Karaniyo not ploughed?

Why was land in Dembochi & Debre Worki not ploughed?

I come from there to here, not seeing a single ox.

The second meaning is, from there to here I came stepping on human corpses.As the author of the wax and gold creatively described the situation, the RPV epidemics practically wiped out the Abyssinian cattle and caused mass population deaths.

Rinderpest infection and Oromo collective memory

In Oromia, the RPV epidemic is recorded in the collective memory of the Oromo people as an extreme disaster. As I mentioned earlier, in Western Oromia it was known as "Bara Nama Nyataa"– "the Period of Human Eater", in Arsi it is known as "Bara Rukkisa"- "the period of extreme famine"; in Southern Oromia it is known as Ciina[5]"the period of termination". In Oromia, the RPV infection killed massive numbers of cattle and caused famine. The dead bodies were often left unburied. Wild animals ate the dead and then those who were still alive and for this reason it was known as "the period of human eaters". This incapacitated the Oromo people socially, economically, culturally, environmentally and politically and conditioned them to easily succumb to Abyssinian colonial rule.

The Oromos recorded the relationships between the arrival of the Abyssinian army and the emergence of the RPV epidemics, food insecurity and other social problems when they say:

Qucibaluun biyya guttee

Ya Waaqi maal nuuti futee.

Qucibaluun tirtirteeti

Haati ijolee ishee gurgurteeti

English translation:

Those who say ቁጭበሉ (sit down in Amharic) are everywhere

Oh God! what have you brought to us?

Those who say ቁጭበሉ (sit down) are running back and forth

In that period even the mothers sold their own children.

The Oromo oral story stated above was quite accurate and confirmed with written records. In 2011, a researcher from South African traced the case of 204 Oromo slaves who were sold into bondage and freed by the British force off the coast of Yemen and placed in the care of Christian missionaries in South Africa[6] in 1890. The records collected from these freed slaves revealed that starving neighbors and close family members took poor children and sold them into slavery for a handful of corn [30].

When the RPV epidemic was still going on, Bulatovich [10] noticed that the major goals of the Ethiopian government in Oromia were to establish fiscal and political security and prevent the people from rising up. Historical evidence shows that when impoverished and hungry armed Abyssinians settled in Oromia they showed deeply negative stereotypes against the Oromo people. Soon after their arrival they participated in the slave trade.

The Oromo collective memory elaborates on the event:

Baraashe, baraa seetee?

Baraa hantuuta nyataani

Baraa abjuun marataani

English translation:

Do you think that the period was ordinary?

It was the period when rats became staple foods

It was the period when depression has become the norm. In Oromia's case, the RPV killed massive numbers of cattle and caused famine. RPV affected the Oromo social, economic, political, cultural and environmental capacity and made them succumb to Abyssinian colonial rule and hindered their resiliency [31]. The Oromo oral stories suggest that the rinderpest virus affected cattle and people. It was thought that the infection was transmitted from cattle to humans and vice versa. There is no scientific evidence that supports this oral story. However, many of the deaths resulted from impaired immunity, poisonings from inferior foods and disruption of normal operation of society. As people's ability to resist infection was hindered, this resulted in the spread of old and new infectious diseases in the region. The mobility of Abyssinian colonial settlers further aggravated the problem. Recorded and suspected infections include typhus, smallpox, cholera and dysentery [29].

Just as the Abyssinians charged the Italian army with deliberately introducing RPV into Abyssinia, so too the Oromos charged Abyssinians with a similar crime. The emergence of RPV epidemics occurred during and soon after Abyssinia invaded Oromia. For this reason the Oromos charged Abyssinians with deliberately introducing the RPV epidemics to Oromia. The Oromo people explained this phenomenon in two intertwined narratives. The first and the dominant narrative is that Abyssinians deliberately introduced RPV to weaken the Oromo people, easily colonize and pacify them to the newly established colonial social order. The second explanation is that Abyssinians are Orthodox Christians and their religious teaching encourages them to abstain from eating animal products during the 40 days of lent and on Wednesdays and Fridays. This made the Oromo people believe that the divine power that the Abyssinians worshipped did not like cattle. For this reason many believed that wherever the Abyssinians settled, their divine power kills cattle. As I have discussed in my previous work, [7] when the Oromo people resisted conversion into Orthodox Christianity, one of their justifications was they do not want to lose their cattle. Indeed, until recently if the Oromo farmers knew that Abyssinians were going to visit them they hid their calves.

[5] In the phrase ciinna, ''termination'' has a broad meaning. It refers to the termination of social, economic, political and cultural structures and practices.

[6] One of those slaves is Bisho Jarsa and she is the grandmother of one of the icons of the South African anti-apartheid activist Neville Alexander

Abyssinians were not responsible for the introduction of RPV into their land. However, we know from history that people often converted their misfortunes into opportunities and used infections as biological weapons against the people whom they saw as the enemy. If I ask what many Oromo elders had asked, would I find reasons to infer that Abyssinians converted their misfortunes into opportunities and used RPV as biological weapons against the Oromo people? In an attempt to settle such questions, I want to explore three situations. The first reason why the Oromo elders suspected the biological weapons story is that they knew about the racist views that Abyssinian elites had developed toward the Oromo people. Perhaps the most subtle and most comprehensive view of most Abyssinians of the time was that the Oromo people were "the enemy to be eliminated or colonized or the evil devil" [23].

In the circle of Abyssinian elites of the time including king Menelik II, killing Oromo men, women, old or young was seen as one of their moral duties. According to Ege [32], there was a merit system under which Abyssinians evaluated their men. The transition from boyhood to manhood required killing either strong animals or people considered as enemies. The killing of a lion counted as killing seven Oromos and killing an elephant as killing 40 Oromos. The system of merit did not differentiate whether the Oromo person was a man, woman, child, old, disabled or a warrior. Until an Abyssinian man killed an Oromo person, he would keep his hair short. Successful killers put butter on their heads. King Sahle-Selassie, Menelik's grandfather, would have to shoot an Oromo child in hiding if he had not been able to kill an Oromo man in a war. The merit system promoted the annihilation of the Oromo people. Later, Asma Giorgis [23], recorded that when the young King Menelik returned from exile in Wallo to Shewa (Menelik's homeland), he mounted an expedition to Salale in order to fulfill the long-standing tradition of killing Oromo people. If such racist stereotypes were well established, could they have then decided to deal with such people by deliberately introducing the RPV epidemics?

The second reason is the socio-cultural norms of Abyssinians. Molvaer [33], writing on socialization and social control among Amharic speakers, closely looked at the games children play. Historians analyze stories, games and songs[7] to trace their origins and accurately interpret the phenomena and reveal the ways societies functioned. Understanding the games children play can give us a clue to the ways societies functioned. Molvaer recorded that one of the most popular games boys and girls played was qitigni-qitingi – syphilis-syphilis. In the game, the initial player – the syphilitic one- tries to get rid of his/her disease by transmitting it to another person and so runs around to touch one or more persons.

Other players run away trying not to be touched by the syphilitic person. As the British song "ring around the rosy" represented the ways societies understood the disease of the time, so too the game Amhara children played represented the way they understood syphilis and other infections and the ways they tried to cure themselves. If they believed that transmitting infection i.e. their misfortune to others would cure them, would they apply the same principle to the RPV epidemic and deliberately introduce it into Oromia?

The third reason why the Oromo people suspected Abyssinia of deliberately introducing RPV to Oromia is the Abyssinian cultural practice known as Tenkayi- - witchcraft and poisoning the enemy. Witchcraft is the Abyssinian practice and belief in magical skills and abilities that are exercised by individuals and certain social groups against others. Mostly it is no more than wishful thinking. However, sometimes the Abyssinian witchcraft person uses biological i.e. dead animals or organs or chemical agents to afflict the targeted person or cattle to have skin contact with the object. If those who believed that Oromos were an enemy to be eliminated, transmitting an infectious disease to other would cure them and those who widely practiced witchcraft, if they found out that RPV was a contagious disease, would they use it as a biological tool against the Oromo people? The questions the Oromo elders asked can only give us circumstantial evidence. Circumstantial evidence is not conclusive enough to charge someone.

Although we have no conclusive evidence to charge Abyssinia with using RPV as a biological tool, there is enough reliable evidence to charge them with neglect. Both the Oromo oral stories and the official record show that in 1877 Menelik conducted a military campaign against the Oromo people and others, who were then plagued by disease [34]. The document does not make clear the type of disease, but in 1882, a cholera epidemic was recorded in Massawa [34].

In 1890, the Ethiopian army that invaded the Ogden region retreated after they became infected with cholera [34]. A year after, when Ras Mekonen's troops again raided Ogden and went as far as the Shebelle River, it is recorded that they also retreated due to a shortage of water in the area and the cholera epidemic [34]. The record also reveals that in 1892, realizing the contagious nature of the cholera and the rinderpest epidemic, the Abyssinians quarantined the cattle handlers' animals sent from Harar to Shewa for famine relief to prevent the spread of this disease before the cattle reached Ankober= Menelik's home town [34].

Interestingly, these cattle were not quarantined as they traveled hundreds of kilometers in Oromia. However, when they reached the Abyssinian heartland, they were quarantined. Obviously the Abyssinians knew about the contagiousness of cholera and RPV, and the means to contain it, when they quarantined the cattle. There is no indication that they took the same care when they traveled in Oromia. Although it cannot be established whether or not this specific act contributed to the spread of the cholera epidemic and RPV, it is known that in Eastern Oromia, through which they drove these cattle, these epidemics had caused devastation [35].

Not only that, the Abyssinian armed settlers traveled hundreds of miles leading their cattle to wherever they were assigned to settle

[7] For example, the famous children's song 'ring around the rosy' is linked to Bubonic plague. Ring around the rosy A pocketful of posies"Ashes, Ashes" We all fall down (This children's song implied that they all would die of the disease).

[24,36]. The incubation period of virulent RPV varies from 15 to 21 days. This means that when the Abyssinian armed settlers frequently travelled with their cattle they most likely moved from place to place with cattle infected with RPV. The Oromo oral story confirms this when it says, "Wherever the Abyssinians went cattle would die". This contributed to the quick spread of the RPV epidemic throughout Oromia. If the transmission of RPV happened to be by a natural process, it would have been slower. In that case, the Oromo people would have made some observations and came up with preventive strategies and minimized the impact. For centuries in order to contain infectious diseases, the Oromo people had widely practiced quarantining people and animals or disposing of dead and infected animals. If the Oromo people had had enough time to observe and had decision making power, they would have quarantined the infected cattle and minimized the damage caused by the RPV epidemic.

Oromo people accused the Abyssinian army of killing adult men and women, taking children into slavery and stealing their cattle and grains as well as burning crops in the field and further aggravating the famine. Pankhurst [36] recorded the policies Menelik II implemented to contain the famine as he said, Menelik sent his officials into every land with instructions to confiscate all concealed grain and to allow the proprietors only sufficient to meet the requirements of themselves and their families for one year, the remainder to be distributed and divided among the starving people.

Again, Menelik's policy was intended to rescue the starving Abyssinians at the cost of the Oromo people who had been dying from starvation. This proved a great encouragement to his people and solidified the Abyssinian concept of Abyssinian entitlement to Oromo land and other resources.

Disease and famine during and after the colonization of Oromia

Several Oromo narratives recount how, after Abyssinia invaded Oromia, both humans and cattle did not thrive. Many cattle died and those that survived could not reproduce due to some type of disease or unknown conditions; and if they did, the offspring did not survive to adulthood. For many years, Oromos took it for granted that where there were Abyssinians, cattle could not survive. In the speech at the commemoration of the mass killing and mutilation in Anolee, the Oromo elders charged the Abyssinian army deliberately introducing cattle disease to Oromia, before and during the colonization [37]. If that is true the RPV epidemic was the Oromo version of golodomor – a Ukrainian term used to describe the killing of people by starvation [38].

Written records confirm that several epidemics occurred in Oromia soon after the Abyssinian conquest or in the course of that conquest. Asma Giyorgis, [23] and Pankhurst [11,24], writing in different eras, both document and analyze the emergence of these epidemics in several parts of Oromia following the arrival of the Abyssinian army. In the detailed work of Pankhurst, who documented the diseases that Oromos and their cattle suffered during and after Abyssinian colonization, can be found estimates of the devastation due to cattle disease, cholera and ensuing famines. RPV killed about 90 to 95 percent of cattle and caused famine.

For the Oromo people, who were predominantly cattle-breeders, this was a disastrous situation. Pankhurst [11,24], de Salviac [9] and Bulatovich [10], who also wrote about this devastation, did not say outright that the Abyssinians used biological agents such as cattle plague, cholera, smallpox and Spanish flu [24,39] to subdue the Oromo people at the time of Menelik II. However, both noted the intense conflict between Abyssinians and the Oromo people, and raised suspicion that these were deliberate acts. Such suspicions have also been raised with respect to indigenous peoples in North America, Australia and New Zealand [40-42].

The Abyssinian version is that the cattle disease that practically wiped out 'their' cattle was introduced by Italians [23,24] in 1887 when Yohannis IV prohibited Italians from going to Metema and other places to purchase cattle to feed their army in Eritrea. The Italians apparently purchased infected cattle from Arabia or India [11,24] and took them to Eritrea. However, before these cattle could be consumed, Abyssinians raided the area and took the cattle to Asmara. As a result, a plague broke out in first in Eritrea, then in Tigray, Gondor, Shewa and then Gojjam [24].

The RPV that was introduced in this region, which was unusually virulent and spread through the region in a short time, was probably a variety unknown to the area (Pankhurst, 1966). The disease consumed both domestic and wild animals such as buffalo, which used to roam in the hundreds but almost became extinct. By 1889, many Abyssinian regions had lost most of their cattle to the disease. Pankhurst [24], noting that in areas 3000 meters above sea level more cattle survived than in lowland regions, reasoned that the severity of the epidemic varied with the altitude of the land. (I believe that there is another explanation- in highland regions the risk of transmission of the virus is less because there were less close contacts).

Rosenfeld [34] recorded that, by 1889, the cattle disease had spread into Shewa. It was recorded that Menelik had lost around 250,000 head of cattle and that some richer Oromos lost from 10,000 to 12,000 [24]. Two years after the rinderpest disease outbreak in 1892, famine struck Northern Abyssinia and this lasted for 10 years [34]. In 1890, famine conditions worsened: Menelik himself and his wife built shelters beside Entotto Virgin Marry Church in Finfinne (Addis Ababa) to feed thousands of his starving people from the royal storehouse and soldiers were ordered to bury the dead [24,34].

In 1891, Menelik II decreed stricter observance of the mass and greater obedience to church laws and liturgy during public prayers since he believed that the cattle plague and famine was God's punishment for the Oromo laxity [34] and accused the Oromo people for the epidemic. Menelik understood the plagues as the work of divine power. As many empire builders who were racist, Menelik II believed that their divine power would not have led them to tragedy and instead blamed the Oromo people, who were in fact the victims of epidemics and colonial policies.

This resulted in a forceful mass conversion of Oromo people to Orthodox Christianity. Although epidemics are caused by natural biological agents, they are propagated by the favorable social conditions created by war and colonialism. The privileges that colonial power gave to the Abyssinians provided survival advantage over the Oromo people.

The Abyssinian elites theorized the survival advantage and privileges they enjoyed as blessings from their divine power. In addition to Menelik II, Abyssinian chiefs such as Dejach Germame, who controlled the Ada Barga (central Oromia region) and Ras Darge, who owned the whole land at Salale (northwestern Oromia) provided relief food to Abyssinians. Empress Taitu helped the recovery of Abyssinians when she sent 300 cattle to Gondor with Oromo men and women to cultivate the lands and Gurage potteries [11]. When Abyssinians came from Gondor to Finfine, Menelik received them courteously and gave them clothes, mules, cows and oxen and Oromo men and women to work for them on their land. That is why amongst many Abyssinians, Menelik II is still seen not merely as a ruler, but the father or even mother of his people (even though it is an insult to call a man a woman). He is referred to as "እምዬ ምንሊክ" (mother Menelik in Amharic) because he provided them food as would a good mother for her children. However, it is important to closely examine the nature of this 'charity.'

Ada Barga is the place where Dejach Germame stored the food that he gave to charity. Dejach Germame was not a farmer or a businessman--whatever he had or gave was what he had looted from the Oromo people. This is also true of the emperor Menelik, Empress Taitu, and the Emperor's uncle Ras Darge. It should also be recalled that the English traveler Blundell [35] visited Eastern and Western Oromia during Menelik's era and wrote that the countryside everywhere showed signs of past warfare and looting expeditions. At the turn of the nineteenth century, he observed many houses that were burnt or abandoned, and the jungle was reclaiming lands that has been settled and cultivated in the past. The country had been laid waste and the people were reduced to starvation because of the two Abyssinian expeditions that occurred in two consecutive years. Pankhurst [11] cited the work of Wurz, writing in French at the same time as Blundell [35], in which the author described Ada Berga and beyond:

The Galla [Oromo] country which surrounds Shoa was completely depopulated and is so still. I have been ten days journey to the west of Addis Ababa (or Finfine) half way to the Abyssinian frontier, and have passed whole days without seeing a habitation. I was shown the sites of a considerable village where nothing remained but thickets and grass.

One European missionary reported that half of the Oromo people in the Harar area had died of the famine [11]. A second was more specific: the country Itu Oromo (cattle-breeders of eastern Oromia) had lost about eight-tenths of its population. While the Oromo people died massively of the famine, the Abyssinians continued looting food and stealing cattle. The catastrophe was so enormous that the land was only half cultivated from previous years. Thus Menelik's expeditions had essentially consumed the resources of the local people, meaning that the 'charity' was at the cost of Oromo people.

Pankhurst [24] and de Salviac [9] recorded that as famine weakened the people, thousands of dead bodies were left unburied and were consumed by hyenas and other wild beasts, who then started attacking healthy human beings in their homes. As has been noted among the Oromos in the Horo-Guduru region, this event was recorded as "baraa namaa nyataa" (the year of human-eater, or big-headed beast in Oromo). Catholic missionaries stationed in Eastern Oromia apparently saved children from hyenas and raised them as Christians at this time [9]. In the Oromo tradition, a dead human body has to have its resting place, not only out of respect to the dead person but also for the safety and security of those who are alive to keep them from being attacked by wild animals.

Rinderpest epidemic and ecosystems in Oromia

RPV played a major role in modifying the structure of complex ecosystems in Oromia. As I have discussed earlier, to a certain degree all ruminants are vulnerable to rinderpest virus. Ruminating animals have complex anatomical and physiological features that enable them to survive in nature and convert the content of forage to protein and fat. Among wild animals, African buffalo and wildebeest are extremely vulnerable to rinderpest virus. Animals such as eland, kudu, and various types of antelopes, bush pigs, warthogs, giraffes, sheep, and goats are moderately vulnerable. Oromo oral stories suggest that the buffalo was widespread in the forests of Oromia. The Oromo people have noticed that the buffalo bulls frequently mating the zebu cattle. They believed that the zebu-buffalo offspring is possible. Indeed, there are several locations in Oromia that took the name Gafarsa – buffalo. However, the RPV had decimated the population of buffalo, giraffe, wildebeest species and others in the wilderness and as a result, they are now rarely found.

Socio-economic impacts

There are close relationships between the history of animal diseases and human welfare. RPV impacted the livelihood of Oromo people in multiple ways. Oromo people earn their living either by rearing animals or cultivating land with oxen. When they lost their oxen, planting and harvesting ceased. The Oromo people produce their essential foods such as milk and meat from cattle. They use the skins to make clothes and rugs. They use the horns to make beer drinking cups. They also use the hooves to make alcohol drinking cups. Famine created ill-health because it forced people to live in environments that made them sick because they were without adequate food and sanitation. When they lost their cattle, their backyards turned from places where children happily played into graveyards. Historical records show that during the colonial conquest the population of Oromos was reduced by two-thirds [9]. In addition to the widespread killings and slave trade, the RPV epidemics played a major part in that reduction.

Oromo people are agro- pastoralists, and their livelihoods are based on animal husbandry. Bride-prices were paid in cattle, so when the Oromos lost their cattle this practice was affected. Most Oromo social-political and religious ceremonies required sacrificing bulls or lambs and when they lost the cattle, this

practice was no longer viable. Payments for rewards and punishments were done in cattle and RPV infections ended this. In references to the termination of social, economic, political and cultural practices, the RPV epidemic is known as ciina– (termination) [5].

RPV caused extreme poverty and starvation in Oromia. This affected the Oromo socio-cultural norms. When extreme poverty and famine became daily realities, it impacted the longstanding ideas and principles of community living. Indeed, historical evidence collected during Irish, Dutch, Chinese and other famines revealed that the health impacts of famine not only affected the first victims but also the second and third generations [43,44]. Famine victims pass on their socioeconomic status i.e. poverty to their children and grandchildren. Not only that, now epigenetic science made it clear that they also pass on weaker physical and mental capacity and vulnerability to some chronic diseases to their children and grandchildren [45,46].

Moreover, the RPV epidemic affected the Oromo's social organizations and institutions. For example, the Gada system, that organized society in age groups and defended society, could not function. The Oromo religious institution was presented by Abyssinians as it was inferior to theirs. In such disparate conditions, some Oromos started to believe that their divine power would not save them from the Abyssinian invasion and rinderpest virus and started to look for alternatives. This caused Oromo religious institutions to slowly erode and made the people vulnerable to the Orthodox, Protestant and Muslim religious missionaries.

The RPV infection had created conditions for pastoralists to abandon their usual ways of life and permanently settle and learn how to farm different types of crops and horticultures. Doing that undermined indigenous knowledge. Also, it created conditions in which the pastoralists learned new skills and caused them to diversify their economy.

As the RPV incapacitated the Oromo people, this created favorable conditions for the Somalis to expand their territory at the cost of Oromia. In other words, the famine caused by the RPV weakened Oromo social and political institutions, and the neighboring competing societies i.e. the Somali people took advantage of the situation and captured Oromo lands. As I mentioned earlier, camels are not vulnerable to RPV and this gave the Somali people survival advantage.

The RPV epidemic also caused the Oromo people some internal displacement. For example, from the Horo-Guduru zone of Oromia, many people had left their home villages and moved westward and settled in Gimbi and Qelem in Jima-Horo district. The Oromo people, whom several European writers described as "the Germans of Africa" [47], "the French of Africa" [9] or simply "people with a republican form of government" [10], died of starvation or were forced to flee in different directions. The Russian traveler, Alexander Bulatovic, closely observed the situation of the Oromo people and described their realities when he said.

The dreadful annihilation of more than half of the population during the conquest took away from the Galla [Oromo] all possibility of thinking about any sort of uprising. And the freedom-loving Galla [Oromo] who didn't recognize any authority other than the speed of his horse, the strength of his hand, and the accuracy of his spear, now goes through the hard school of obedience (Bulatovic).

Moreover, as the RPV epidemics caused starvation and weakened Oromo socio-political institutions, it created favorable social conditions for slave traders to target Oromo children. Historical records collected among the Oromo children who were sold into slavery during this period show that family members or neighbors took poor children and sold them into slavery or exchanged them for a bag of corn [30].

The Oromo survival strategy

The Oromo people survived the RPV epidemic for two major reasons. The first was the creativity of Oromo women. Oromo mothers quickly developed their culinary art skills and made traditionally non-edible plants edible. The Oromo oral story suggests that during this famine they ate foods that were not traditionally consumed. As I mentioned earlier in the song, during the epidemic rats had become one of the sources of protein. Some of the foods happened to be allergenic plants. According to my informant Biru [48], Oromo women were creatively able to reduce the allogenic effects of plants and able to feed their families.[8]For example, a plant that is widely grown in nature known as Roobi, which also mean allergen in Oromo, was widely consumed. The other strategy that helped the survival of Oromo people was gathering wild fruits and vegetables. In some cases horses, mules and donkeys that are immune to RPV were used to plow the land.

Although this cattle disease was new to the Oromo people, when they realized that it was contagious they started to use quarantine (waal laagu) and control the movement of cattle and other animals and buried the dead cattle. However, given that Oromo political power was hindered, they could not stop the movement of Abyssinians who were coming with cattle to settle in Oromia. At one point the Oromo people developed their own inoculation[9] from the urine of infected cows.

Rinderpest virus in sub-saharan Africa

The RPV that emerged in Massawa in 1887 shortly crossed the Ethiopian border, went south to Somalia and Kenya and west to Sudan and covered all sub-Saharan African countries. In these countries, RPV epidemics killed approximately 90% of the cattle and many sheep and goats. Wild buffalo, giraffe and wildebeest populations were practically decimated. The loss of plow animals, herds and hunting animals resulted in mass starvation, killing two-thirds of the human population of the Maasai people in Kenya

[8] My informant Biru discussed that Oromo mothers, instead of giving food to their children in a group as usual, came up with the idea of giving it to them individually and in darkness. Giving food individually and in darkness prevents competition for food.

[9] For inoculation, the Oromo farmers collected the urine of infected cows and kept it for 90 days at room temperature and then they put a drop of the urine in one of the ears of a healthy cow.

and Tanzania. The Maasai people, who were predominantly cattle breeders, were economically and politically incapacitated by rinderpest [49]. This created conditions for the colonizers and the agriculturalist groups to take advantage of them.

By 1896, large numbers of cattle and wild ruminants were dying on both banks of the Zambesi River. Within a few weeks, most of the cattle around Salisbury (now Harare) were dead. In the same year, the disease entered the South African Republic and moved on remorselessly into Cape Colony and German Southwest Africa in 1897. All attempts to stop the plague failed. In Zimbabwe and South Africa, black Africans believed that white settlers or white South Africans were spreading RPV epidemics. The whites, on the other hand, believed that the blacks spread the disease [49]. Within a short time, the RPV epidemics killed most of the cattle of both blacks and whites. Given that the economies of black South Africans were not diverse, the infection impoverished them the most. This caused black farmers to leave their farms and move to cities and towns and become daily laborers. On the other hand, the RPV created favorable conditions for white farmers to expand their farmlands.

The significant reduction in the number of grazing animals also allowed thickets to quickly form in grasslands. These thickets provided breeding grounds for tsetse flies, resulting in an outbreak of sleeping sickness in humans (Lyons, 1992). RPV epidemics were the worst public health disasters that the colonial agenda and the colonial social policies had ever caused Africa.

Conclusion

This paper has covered nine major points. First, the RPV that had brought devastation to people in Oromia and Sub-Saharan countries was brought in by Italian colonial forces. Although Italy had taught the world the need to quarantine ships as a preventive measure for infectious diseases and had practiced it in their own territories, when their army settled on the Abyssinian seaport they failed to use quarantine. This was not an accident; it was part of the racist mindset that subconsciously informed them that the people whom they were about to colonize were inferior to them and did not deserve equal protection.

Second, the Abyssinian elites had adopted the European racist mindset and constructed the Oromo people as "the enemy – who do not deserve equal protection". That attitude further aggravated the effects of RPV epidemics in Oromia. This was demonstrated in several ways: a) the Abyssinian armed settlers freely moved with the few cattle they had throughout Oromia and spread the RPV quickly; b) Menelik II tried to handle the epidemics by prayer and accused the Oromo people of not being Christians and that the divine power had therefore ignored their prayers and famine persisted; authorized his army to loot food and steal cattle and shipped them to the Abyssinian homeland and forced the Oromo people to feed the armed Abyssinian settlers.

Third, the devastation caused by RPV infections made the task of the Abyssinian colonial settlers easier. Historical evidence also shows that in the case of the Maasai people, the British army waited until the RPV incapacitated the people whom they wanted to colonize because that made their colonial occupation easy because there was little or no resistance.

Fourth, the RPV epidemics, compounded with the colonial power, impaired the resiliency of the Oromo people. RPV epidemic infections persisted in Oromia for over 120 years- until 2010 when the African Animal scientists declared that Africa was finally free of the deadly cattle disease.[10]

Fifth, colonizers justified their colonial agenda by using the positive term "civilizing mission" whereby they pretended to be healers. Colonialism meant unprecedented social, economic, political and cultural domination. Domination causes major detrimental social and environmental changes. In many parts of the world, colonial public health policies were criticized. There were cases when the colonialists' had deliberately used infectious diseases to wipe out the indigenous people. There were cases when the colonizers made efforts to save their armies and colonial administrators while acting indifferently to others. There were cases when the colonizers made efforts to save those who were involved in their industry.

This means that in Oromia and elsewhere, colonialism and domination constitute disease, whereas liberation and social justice represents peace, social transformation and better health.

Sixth, it is evident from human history that human beings regularly seek to convert their unfortunate events to their advantage and there are enough reasons to question if the RPV was introduced by accident or on purpose. If it was not used as a biological tool, it was part of the racist mindset that others "do not deserve equal protection". Challenging racist and biased views should be seen as part of disease prevention and health promotion.

Seventh, most importantly the RPV epidemic taught us that racist mindsets and colonialism are disease or disease causing agents. The Oromo people and others need to be vigilant and resist all forms of racist views and impositions and make sure they freely develop their own policies and procedures and prevent social and biological causes of diseases.

Eighth, the Abyssinians suspected the Italians, the Oromos suspected the Abyssinians, the black South Africans suspected the white South Africans and vice-versa of deliberately introducing the RPV epidemic. Such widespread mistrust taught us the importance of having an equitable society and that enshrining participatory democracy in policy making is a prerequisite in addressing public health problems.

Ninth, when the RPV started if the Oromo economy was diversified enough, the damages caused by the disease and colonial policy would have been minimized. Diversifying the economy should be seen as conditions necessary to guarantee food security.

Acknowledgment

I would like acknowledge that I made use of the feedbacks of experts in Veterinary Medicine, Dr. Nemera Gerbaba and Dr.

[10] http://balita.ph/2010/05/11/animal-scientists-declare-africa-free-of-deadly-rinderpest-disease/

Fantahun Diba. I also indebted to other Oromo men and women, including my Grandmother –Bayisee Bikilee and my mother Nagasse Debela, my father Fufa Dugassa, who have shared with me stories about Rinderpest epidemic in Oromia.

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