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"A violent and harmful measure": quarantines in Peru and the development of a Pan-American health policy (1850-1905)[1]

PATRICIA PALMA
Departamento de Ciencias Históricas y Geográficas, Universidad de Tarapacá, Chile
ppalma@academicos.uta.cl

Abstract. This article analyzes the imposition of quarantines in Peru and the debates generated around their implementation as a public health policy. The time frame ranges from the yellow fever epidemic in the 1850s to the 1905 Washington Sanitary Conference, which unified maritime public health criteria in the Americas. The study argues that discussions about the economic and social costs of the imposition of quarantines have been a constant in the history of health in Peru and Latin America. The limited effectiveness of these policies led authorities to rethink their imposition and to implement alternative measures to prevent the spread of epidemics.

Keywords: quarantines, Pan-Americanism, yellow fever, bubonic plague, Peru, history of medicine

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Introduction

The current SARS-CoV-2 epidemic has exposed economic inequalities in regions such as Latin American and the Caribbean, which have over 140 million informal workers (Organización Internacional del Trabajo, 2018). The debate on how government policies should deal with the pandemic has been focused on the social and economic costs of lockdowns and the resulting total shutdown of so-called "non-essential" sectors of the economy. While countries such as Peru and Argentina closed their borders and imposed total lockdowns as early as March 2020, Brazil and Chile were reluctant to impose similar measures. According to Argentine president Alberto Fernández (2020), this was not an easy decision: "Many people told me that I was going to destroy the economy through the lockdown. If the choice is between the economy and life, I chose life. Afterwards, we will see what do about the economy."[2] Meanwhile, Chilean president, Sebastián Piñera (2020), took a very different position: "We have to reactivate our society, because if we remain under lockdown we will have a social crisis of unemployment." Both outlooks were either questioned or defended by diverse social actors, including doctors, representatives of organizations of workers, sellers, and businesspeople.

Illnesses and epidemics, in which elements repeat themselves even though each one has many particularities, are part of the human experience (Armus, 2020; Álvarez, 2020). The current pandemic has made it clear that during a health crisis, there are important continuities and differences in the way that states and the population react. At the same time, we know that, on the political level, there has never been and nor is there now any one formula to deal with the propagation of contagious diseases. Studying the measures that are implemented during plagues in order to stop or limit their spread, such as lockdowns, aids our understanding of the complex dialogue or interaction between the past and the present (Carter & López, 2020).

The current epidemic differs fundamentally from its predecessors in that the application of lockdowns has been a widespread action, either accepted or rejected by authorities. These days, the word "lockdown" has become part of our vocabulary: it is repeated in the media, by political officials, and by international bodies. Still, quarantines, as they were called in the pastas their earlier equivalents, are actions that were adopted over the centuries by governments. Historically, these were measures primarily related to maritime traffic, when ships, merchandise, and passengers who had been in

2 All translations from Spanish-language sources are by *Apuntes*.

contact with populations exposed to contagious diseases such as yellow fever, cholera or the bubonic plague were quarantined for inspection when they arrived at an as yet unaffected port. In extreme cases, confinement implied the complete shutting down of a dock until the threat had dissipated. The current situation, in which entire populations have been confined to their homes and commerce has been restricted or redirected to virtual spaces, is without doubt a new stage in the relationship between plagues and society.

As Alex Chase-Levenson (2020) notes, the study of the history of quarantines has seen a resurgence in recent decades. These phenomena are analyzed from different perspectives. Focusing on economic factors, Harrison (2012) studies both how different epidemics—from the bubonic plague in the 14th century to contemporary ones—have been spread by commercial activities and the measures designed to contain or prevent them. From a social perspective, various academics demonstrate that policies such as quarantines to control infectious diseases have been one of a series of mechanisms actually intended to prohibit the immigration of people considered as undesirable (Bashford, 2002; Shah, 2001; Markel, 1999; Mayne, 2008). In geographical terms, these studies concentrate primarily on the Mediterranean and the Atlantic, though in recent years they have expanded to include Asia and Oceania. In the case of the Americas, the studies mostly concentrate on the United States (Bashford, 2016) though recent research has focused on quarantines in the Caribbean and particularly Puerto Rico and Cuba (Schiappacasse, 2014; Schiappacasse, 2016; McLeod, 2010).

This article employs a historical perspective to analyze the developments and debates that led to the implementations of lockdowns in Peru in a Pan-American context. The implementation of such public health policies faced opposition from powerful economic interests which, on the national and international levels, criticized the closure of ports or the restriction of maritime traffic, sometimes leading to bilateral tensions. The initiation of medical congresses and the signing of multilateral agreements in the second half of the 19th century made it possible to reach consensus on health policies to deal with epidemics. The issue of when and how quarantines should be implemented and how long they should last were important points of discussion related to controlling the spread of diseases throughout the continent. This study analyzes the debates on closing ports and limiting maritime space, which affected the commercial interests of important groups of elites and small naval entrepreneurs during the yellow fever pandemic of 1867–1868 and the bubonic plague of 1903–1904. In addition, we examine the application of a regional protocol regarding the maritime health police at the beginning of the 20th century, as well as prophylactic measures that

served as alternatives to the closure of ports, such as the establishment of quarantine stations on islands close to major ports for suspicious or contaminated ships.

The timeframe covered starts with the yellow fever epidemic of 1850, which affected the majority of Pacific ports, and ends with the Pan-American Sanitary Conference held in Washington in 1905, which established ordinances regarding maritime health and was approved by almost all nations in the Americas. The article is divided into three sections. The first examines the various outbreaks of yellow fever in the mid-19th century and how this illness led to important debates when quarantines were imposed in Peru and elsewhere in Latin America. The second section analyzes the transformation of Pan-American public health policies, especially regarding confinement, and alternative measures implemented by various countries to avoid closing their major ports during epidemics. Finally, the transformation of this health policy is analyzed in the context of the bubonic plague that affected the region at the beginning of the 20th century, when the various international agreements adopted in the preceding decades were put to the test.

In recent years, the historiography of health has seen an important resurgence in Latin America and Peru, as various actors involved in the processes of getting sick and receiving treatment have been incorporated (Cueto & Palmer, 2015; Palma & Ragas, 2018; Palma & Ragas, 2019). Nevertheless, it remains very difficult to access the testimonies of "ordinary" people to understand their experiences of getting well and their impressions of certain health policies, and to know if these were obeyed or, on the contrary, resisted. This study is based on various documentary sources such as medical theses, official reports, medical journals, newspapers, and proceedings of national and international congresses. Undoubtedly, all of these tend to emphasize the viewpoint of the state regarding the implementation of particular health policies. Despite this, these types of sources, especially newspapers, indirectly gives us an insight into the responses of different social actors to public health policies—in this case, quarantines.

1. Yellow fever in the Pacific

Quarantines in 19th century Latin America were primarily oriented towards controlling maritime traffic, and thus primarily affected port cities. As Peruvian medical student Rufino López noted: "the quarantine is nothing more than the detention of ships for a more or less prolonged period and at a distance that is more or less distant from the points of easy access by navigators" (1858, p. 2). The goal of these measures was to impede, through the detention of ships, the transmission of diseases from one point to another,

where they might later acclimatize to the local surroundings. An infected body could harm the local environment and spread the disease through the air. At this time, the miasma theory of disease transmission was still the hegemonic paradigm in Peru and other Latin American countries. It was thought that disorders were transmitted through the miasmas present in the air, originating from the putrefaction of organic materials such as turbid stagnant waters or the decomposition of plants and animals and entering the human body through respiration (Lossio, 2003). To halt their spread, it was essential to control the entry of infected people into cities and notify the authorities immediately.

For most of the 19th century all countries in the Southern Cone had their own maritime legislative provisions, including decrees regarding the entry of ships arriving from contaminated ports and the treatment of passengers with contagious diseases. The lack of a regional protocol for activating preventative measures to prevent the propagation of epidemics during most of the 19th century not only increased the spread of these diseases but also created tensions between some countries when one country arbitrarily decided to close down maritime commerce. According to Peruvian doctors Carlos Paz Soldán and Sebastián Lorente—both fervent opponents of the total closure of wharfs at the beginning of the 20th century—the "closed ports policy" pursued for most of the 19th century by countries like Peru may have been justified by the public interest, but "was a starting for protests and complaints of the chancellery, which often clouded international cordiality. The quarantines came to be seen as acts of hostility to the commerce and the economy of the nation that was the object of these measures" (1924, p. 20).

The implementation of quarantines at ports was common in the first half of the 19th century but was disputed and questioned by some sectors, especially merchants. The revenues of the newly independent former colonies in the Americas came in large part from the export of raw materials during a period that has been characterized by Llorca-Jaña (2014) as early globalization. Foreign trade—especially with the United Kingdom—was dynamic and growing. This transformed maritime traffic into a key factor for local economies. In the case of Peru, the export sector underwent changes starting in the 1940s due to the massive export of guano which, according to José Deustua (2011), created a very strong link between Peru and international commerce. In this context, shipping companies and merchant groups believed that restrictions on the arrival and departure of ships to and from Peruvian ports negatively affected their economic interests. It is not surprising that some ship captains hid people suspected of having infectious

diseases in order to avoid quarantines and the paralysis of traffic, or that they acted in cooperation with some local authorities who, as we shall see below, did not apply what doctors thought was the necessary severity to suspicious vessels.

In many cases sanitary maritime control was inefficient in the recently independent American republics because, for example, they had legislation that was outdated and not in consonance with the large commercial flows of the mid-19th century. It was only in the last decades of the century that a reformist movement emerged and national departments or counsels of hygiene were created in countries such as Argentina (1880) and Chile (1892), charged with maritime and territorial sanitation (Álvarez, 1999; Illanes, 1993. In the case of Peru, such a reform took place in 1903 with the establishment of the Office of Public Health (Dirección de Salubridad Pública) (Cueto, 1997). During most of the 19th century in that country, maritime and international sanitation fell under the 1826 decree establishing the Supreme Sanitary Board (Junta Suprema de Sanidad) which was in effect until 1887 (Paz Soldán & Lorente, 1924). According to this decree "all ships arriving from countries which are known to harbor the contagious fever called yellow should lie to at two canon throws from the port to await sanitary sanction" (1924, p. 11). On the subject of quarantines, the decree states that for their duration there should be "perfect isolation of the infected from each other, and the guards and other health employees" (Paz Soldán & Lorente, 1924, p. 11). Nevertheless, these measures were rarely followed, which is why the government had to implement special procedures against the possible arrival of epidemics, as occurred in 1833 when the government issued a quarantine decree for ships arriving from Guayaquil (García, 2002).

If ever there was an illness that led intense discussions about the dissemination and development of contention policies, it was yellow fever. It appeared regularly in the ports of South America and the Caribbean, and provoked heated debates about whether it was contagious or climate-related (Harrison, 2012; McNeill,, 2010). As Mark Harrison (2012) notes, the spread of the epidemic from the Americas to Europe led countries such as Portugal and France to impose quarantines on ships arriving from Brazil in the 1850s. Although these measures were reasonable, the British opposed them because doctors and the majority of the public believed that the best way of preventing the entry of the disease was the disinfection of ports rather than the imposition of quarantines (Harrison, 2012). Despite this, Great Britain, forced by the expectations of other European countries, imposed port quarantines in the following years—but proposed a new system called the "English System" and adopted it in 1872 (Booker, 2007). In contrast

to the established model, which centered on closing docks or placing limits on suspicious ships to contain epidemics that posed a risk to the public, the English System focused on individuals. According to Maglen (2014), this system involved a combination of port disinfection and sanitary vigilance rather than port closures. The English System quickly expanded to some Latin American nations, notably Argentina, which had considerable naval trade with Great Britain.

Just as in international medical circles, among Latin American and Peruvian doctors there was no consensus regarding the origin and form of transmission of yellow fever. In Peru, one sector considered it to be a contagious disease that spread from person to person through miasmas that emanated from the diseased body and were transmitted by air to others. This group included doctors José Macedo, Manuel Corpancho, and Miguel de los Ríos; the latter would go on to become Dean of the Faculty of Medicine in Lima. On the other hand, the anti-contagion group believed that diseases and epidemics appeared spontaneously in a country as a result of inadequate environmental conditions, and therefore proposed the eradication of urban pollution sources (Arce, 1919). Debate was no less contentious when it came to prophylactic measures for naval commerce. If it was demonstrated that a given disease was endemic to Peru, the quarantine of ships arriving from ports infected with that disease was considered excessive and unnecessary. In contrast, if it was confirmed that the disease was "exotic" and imported into Peruvian territory through infected passengers or their luggage, quarantines were the basic measure for stopping contagion (Arce, 1919). These disputes lasted for several years and were not satisfactorily resolved, although the point of view that favored contagion theory gained ground in the Faculty of Medicine of Lima.

In the 1850s, yellow fever was endemic in various port cities, especially those with tropical climates such as New Orleans, Panamá City, and Guayaquil. In 1853, there were several cases of people who had arrived in Peru from Central America who appeared to have symptoms of yellow fever. At the beginning of that year, two sick passengers came ashore from the steamship *Lima* and died within a few days, and it was they who, according to doctors, transmitted the disease. A few weeks after this incident, the Supreme Sanitary Board (Junta Suprema de Sanidad) found out about the cases and decided to put into practice a series of sanitary measures to control ships and impose the regulations established in the outdated sanitary decrees promulgated in the early years of the Republic in 1833 and 1834 (Ramón, 1999). At the same time, the Sanitary Board of Lima decided to call out the man in charge of the Sanitary Board of the Port of Callao for not having

acted with the necessary zeal, since it was clear that the inspection carried out on the steamship *Lima* was deficient.

During this epidemic, tensions between the medical community, political authorities, and merchants became evident regarding the fulfillment of sanitary measures, and intensified the following decade. Dr. Rómulo Eyzaguiree, in his history of the yellow fever epidemics in Peru (1906), laid the blame for the spread of this disease directly on the steamship company, merchants, and passengers who had concealed the cause of the first two deaths in order to avoid port inspections and quarantine. Eyzaquirre noted that "The pretext of ill-understood individual freedom and of the so-called higher interests of commerce prevailed and the gains of one and the majesty of the other were manifested in some hundreds of individuals who died of yellow fever" (1906, p. 16).

The medical community's criticism of the majority of commercial interests when it came to personal safety would be a permanent feature in the following decades, especially in times of epidemics. Doctors from the recently established Faculty of Medicine (1856) discussed the benefits of implementing quarantines. In 1858, medical student Rufino López dealt in depth with this matter in his thesis. He argued that the quarantine of ships should be implemented no matter the economic damage this might cause a nation since wealth and commerce did a country no good if a disease was a threat not only to the ships that left its ports but also those that arrived. In López's opinion, the countries where avarice and the instinct for self-preservation predominated were those that were most vulnerable to epidemics. This was because the principal enemies of isolation measures were merchants:

> It is well-known that the countries whose principal sources of wealth and industry were linked to maritime commerce attempted not only to discredit the use of quarantines but also to abolish them, opposing compliance with public health requirements. On the other hand, those countries where the maritime industry had little or no importance implemented quarantines successfully. Thus, it is evident that commerce had a direct influence on epidemics, extending their duration, diminishing their intensity, or even suppressing them (López, 1858, p. 10).

It was during the yellow fever epidemic that hit Lima and Callao in 1867 and 1868 that discussions about whether or not to implement quarantines began gathering steam. This plague is considered to be the worst faced by Peru in the 19th century, with an infection rate of ten of the population of Lima. As historian Gabriel Ramón (1999) notes, this epidemic spelled a

critical moment in which health measures were felt on a large scale in the city through the combined action of the Ministry of Justice, Worship, Education and Welfare, municipal and welfare officials, and the medical community. The incorporation of the medical profession was not accidental. In Peru, like in the rest of Latin America, health professionals were beginning to play a leading role in the development of public policies (Cueto & Palmer, 2015). The medical community was undergoing a process of professionalization, and by the end of the century had been transformed into the chief ally of the modernization process then taking place in Latin American cities, which led to a reduction in mortality rates and helped combat infectious diseases through prevention and hygiene (Parker, 1998).

In contrast to the earlier 1853 yellow fever epidemic, this time the government quickly took measures to avoid contagion. In 1867, the Peruvian consul in Guayaquil sent information about an outbreak in the city. In response, the government decided to consult the Faculty of Medicine in Lima about the best way to proceed. The dean stated that "all ships, both sail and steam, in that affected port should be subject to an observation quarantine for seven days" (Eyzaguirre, 1906, p. 34). Following this advice, on February 6, 1867, a supreme resolution was issued which decreed that all ships coming from Guayaquil should present their papers and undergo a quarantine for a week. In March, the measure was applied for the first time to a ship sailing from Panama City that had stopped in Guayaquil. According to Eyzaquirre, this was enough to "raise a clamor of protest from merchants and the steamship company to whose defense the capital's city's press soon rose" (1906, p. 35).

In March, the British Pacific Steamship Navigation Company, which was interested in putting an end to the quarantine in the port of Callao, consulted English doctor James J. Watson, a member of the Royal College of Surgeons of Britain, for information on the health situation in Panama. This health professional told the company's agent in Peru, Mr. George Petrie, that yellow fever had disappeared from the isthmus, an opinion that was supported by the Peruvian consul in that city. In 1863, the government had conceded to George Petrie, in his capacity as company agent, exclusive rights for 20 years for the construction of a dock in the port of Callao for careening and repairing ships (García, 1879). Two years later, the government authorized the same agent to construct a pier in the port for unloading and loading cargo from the company's ships, during which time the government would finish other projects planned for the port (Templeman & Bergmann, 1870). Faced with pressure from the press and taking into consideration these two opinions, which considered that there was "no reason to fear contagion nor

to decrease commercial activity through the observance of the quarantine" (Eyzaguirre, 1906, p. 37), the Minister of Justice, Worship, Education and Welfare, the Bishop of Tiberiópolis, decided to repeal the supreme resolution issued in February that established an obligatory quarantine of six days.

Despite opinions in the press, the epidemic did not a set back the fiscal budget or sea commerce. In fact, customs revenue increased during the years of the epidemic. In 1866, Peru received 3,904,371 soles from customs duties, and this increased to 3,998,020 and 4,405,629 respectively during the years the epidemic was at its worst. Income from guano doubled between 1866 and 1868, making the latter a very positive year for the Peruvian government (Contreras, 2011). These revenues allowed for an increase in the budgets of some sectors of the government, including the Ministry of Justice, Worship, , Education and Welfare, making it possible to meet epidemic-related expenditures on the likes of cleaning the city's irrigation ditches (in accordance with the miasma theory on the transmission of illnesses), hiring medical personnel to help patients in their homes when the hospitals could no longer receive them, and building a modern hospital in Lima, the Dos de Mayo Hospital (De los Ríos, 1868).

Despite being a positive year for the economy, in part because of maritime commerce, the free passage of ships led to a protest by the Faculty of Medicine and increases in cases of yellow fever in the biggest Peruvian port cities. The consequences of disregarding the recommendation to quarantine were evident in the number of such cases and consequently, in October 1867, the ministry issued a decree reestablishing the quarantine. Nevertheless, as Eyzaguirre points out, this measure came too late, plunging the country into one of its worst health catastrophes:

> […] the eternal conflict between hygiene and commerce, between the loss that at the moment is not seen, is not appraised—because we have never stopped to consider the value of the human entity—and this other commercial loss, instantly tangible and immediately newsworthy, because it is represented in money that is not collected" (1906, p. 38).

The conflict between commerce and hygiene continued in the following decades, because as a doctor noted: "Unfortunately history repeats itself" (1906, p. 39).

2. "No more quarantines": the transformation of international health policy

In 1851, dozens of medical authorities met at the first International Sanitary Conference in Paris, which sought to standardize criteria for international

epidemiological readiness. Representatives of nations in the Americas did not attend. In the following years, these types of events were recurrent, focusing especially on the goal of systematizing measures to control the propagation of illnesses such as cholera, yellow fever, or the bubonic plague (Cueto, 2004). Despite not directly taking part in these events, Latin America was not totally excluded from the discussions taking place in the Old World regarding maritime health. Great Britain was the principal economic partner for many of the region's countries, which therefore closely followed the English System that was implemented starting in 1872.

In the second half of the 19th century opposition to the imposition of total port quarantines and lockdowns increased in Latin America countries, which instead opted to deal with epidemics through protection measures that had the least possible impact on international commerce as well as the establishment of joint regional policies. The first congresses took place among countries with common borders or that were part of the same maritime route. For example, on the Atlantic side, in 1873, representatives of Uruguay, Argentina, and Brazil met in Montevideo, where they sought to establish uniform rules for quarantines and disinfection of ships arriving from ports in which contagious diseases such as cholera and yellow fever were endemic (Cueto, 2004). Years later, in 1887, these same countries ratified their agreements in a meeting in Rio de Janeiro.

In the case of the southern Pacific, in July 1887 the Peruvian government invited all the countries of the Americas to a health congress in Lima, but only Peru, Bolivia, Chile, and Ecuador attended the meeting when it was held in January 1888 (Márquez, 2002). The measures adopted had do with reciprocal notification of illnesses such as cholera and yellow fever through the creation of a central information office in each country, so that one could inform the others as rapidly as possible if there was an outbreak of either disease (Cueto 2004). General prophylactic rules to prevent these diseases, related to the organization and characteristics of quarantine stations, classification and disinfection of ports, ships, and other sanitary measures, were established. In regard to quarantines and following the logic of this procedure during the 19th century, which was centered more on cargo than on passengers (Barnes, 2014), two types of quarantines were decided upon: "observation" and rigorous. The former consisted of detaining a ship for the time necessary to carry out a detailed health inspection on board. All suspect ships had to submit to this quarantine. If the vessel—rather than its passengers—was found to be infected, it had to submit to a rigorous quarantine, which meant "the absolute isolation of the ship for the time necessary to bring it to salubriousness and disinfect the objects infected with

cholera and for the maximum incubation period to pass" (Muñoz, 1888, p. 48). The incubation period set was eight days. Thus, the precautions concentrated on ships arriving from infected or suspicious ports and those that had some kind of contagion onboard, while ships arriving from "clean ports" passed the port authorities' health inspections without problems.

The institutionalization of Pan-Americanism in the field of health was not achieved until the first years of the 20th century. The International Conference of American States that was held between October 22, 1901 and January 22, 1902 in Mexico was attended by 15 American nations, including Peru. As Marcos Cueto (2004) points out, this meeting could be considered the starting point for the continental institutionalization. Eight resolutions intended to modify international health policies were approved. Their objective was to improve "health conditions in cities so that illnesses do not propagate instead of having to prevent infections through quarantines, which impede traffic and create commercial barriers" (Cueto, 2004, p. 38). The main issues discussed during this conference were covered by the press in the countries that attended. In April 1902, Peru's daily *El Comercio* published information on the event and, especially, from the perspective of the Peruvian delegates, who centered their presentation on two central issues: "1. It is not possible to assure health in a country without a system of solidarity between all nations; 2. The system of prohibitive quarantines should be eliminated and substituted by other types of precautions that are less detrimental" (1902, p. 2).

The Peruvian position, according to *El Comercio*, was based on the publications of eminent Peruvians and especially the opinion of Dr. Francisco de Rosas who, during the Sanitary Conference in Lima in 1889, stated that it had been "scientifically demonstrated that closing ports and borders did not impede the invasion of epidemics that rapidly penetrate and propagate in countries that practice isolation" (*El Comercio*, 1902, p. 2). The newspaper highlighted the decision by the conference to eliminate prohibitive quarantines of manufactured goods and other merchandise originating in clear areas, including those that had traveled through infected territories without stopping. In addition, it noted that a new meeting was planned for the following year in Washington at which health conventions would be signed and regulations decided on.

In December 1902, the First International Sanitary Convention of the American Republics was held, founding what today is called the Pan-American Health Organization (*International Union of American Republics*, 1903). According to doctors Paz Soldán and Lorente (1924), this prepared the ground for a sanitary magna carta, which was approved in 1905 at the

Second International Sanitary Convention held that October in Washington. This event was attended by representatives of almost all the nations of the Americas. It codified sanitary procedures, most notably those for the control of diseases such as cholera, bubonic plague, and yellow fever. The agreements signed were considered the first Pan American Sanitary Code (Márquez, 2002).

Among the changes observed in international maritime health at the turn of the century, one outstanding development was the implementation of sanitary services on islands, which allowed for more effective isolation of infected individuals in order to interfere as little as possible with international commerce. The United States was one of the first to implement quarantine stations at its two most important ports: New York and San Francisco. In the case of the Pacific coast, Angel Island was turned into an immigration station at which, according to Bashford (2002), the control of public health and of infectious diseases were among the technical pretexts used to prohibit the entry of undesirable immigrants to the country. The island served as a disinfection center and, in 1893, a hospital and a detention center were added, transforming the island into a medical detention center for immigrants and travelers from Central and South America, Australia, and, primarily, Asia (Shah, 2016; Lee & Yung, 2010). The arrivals were forced to stay on the island for medical observation and treatment, should that be necessary. This process was clearly racialized, since the passengers' medical monitoring, treatments, and time held on the island depended on their racial origin and whether they were considered a danger to public health and the nation.

In the following years, several countries in the region followed this model and established permanent sanitary stations on islands close to important ports. As Chilean doctor Conrado Ríos (1914) pointed out, the various island territories that were adapted to take on this work included Isla de las Flores near Buenos Aires, Culebra in Panama, El Cardón in Nicaragua, Martin García in Buenos Aires, La Uvita in Costa Rica, and others. These sites were equipped with disinfecting stoves and other sanitary measures for passengers' equipment and clothes. In the case of the Atlantic coast, the Isla de la Flores next to Rio de Janeiro played a key role as one of the points of arrival for ships coming from Europe. The International Sanitary Convention of 1904 agreed on using this island for the sterilization of ships and a place for quarantining passengers suffering from exotic diseases, together with those who were traveling in third class (International Union of American Republics, 1906). At the port of Buenos Aires, a quarantine station was set up on the island of Martín García which, between 1889

and 1893, received 19,848 passengers suffering primarily from digestive ailments.

In the case of the southern Pacific, Conrado Ríos explained the important role of the sanitary station established on the Isla de San Lorenzo near the coast of Callao in Peru, and the need for Chile to apply a similar model of quarantining. The Isla de San Lorenzo, only eight kilometers long, had been used since the colonial period for various purposes. During the 17th century, it housed a "*presidio de forzados*" or jail for those sentenced to forced labor, which involved cutting stone to be used for construction in Lima and Callao (Mariátegui, 1957). During epidemics in the 19th century, the island started to be used continuously for sanitary purposes. In 1833, when news that Asian cholera had reached Mexico and Central America, the Peruvian government reacted by issuing a supreme decree that, among other things, called for a quarantine station to be established on the Isla de San Lorenzo with two areas: one for housing for passengers and crew, and the other to air ships' cargo (García, 2002; Vargas, 2020). This project was not implemented, however, and in 1866 a new resolution approved the construction of a quarantine station on the Isla de San Lorenza, which proved very useful in the following years when the epidemic wreaked havoc on the port. That year, the prefect of Callao, Coronel Mariano Herencia, informed the Harris family from England, owners of a foundry and a house on the island, of the need to provisionally use their house to construct a jail. However, when in January 1867 news arrived of the yellow fever epidemic in Guayaquil, the prefect of Callao decided "to establish there […] a quarantine station where the sufferers of yellow fever arriving from overseas were to be medicated" (Inga & Carcelén, 2020, p. 190).

The island was transformed into an isolation center for ships coming from abroad and, like in California, for Chinese immigrants who bore the brunt of the restrictive measures. Between 1849 and 1875, 100,000 Chinese coolies arrived in Peru and went to work on sugar and cotton haciendas in the north of the country and on the guano islands. Watt Stewart (1951) recalls that when the ships carrying coolies neared Peruvian ports, onboard cleaning activities began in anticipation of the inspection to which they were submitted. The captains and crews gave each Chinese a new set of clothes, hat, and pair of shoes. Their sleeping quarters were cleaned and fumigated and everything possible was done to have those who were sick stand upright. Once the ships entered port—usually Callao—they stayed incommunicado until port health authorities came aboard. If they had complied with all the legal requirements, the passengers were free to disembark (Steward, 1951).

However, during epidemics, the port authorities sometimes prohibited the disembarkation of Chinese immigrants, considering them a threat to public health in the city and the country. For example, in March 1868, during the spread of the yellow fever, the harbor master of Callao, Mr. Manuel Palacios, informed the prefect of the city of the arrival of the Italian frigate *Unncowah* from Macao, with 491 Asian colonists. The prefect ordered "these poor wretches to be sent to the Ysla de San Lorenzo for some days so they can refresh themselves" (cited in Inga & Carcelén, 2020, p. 192). In this way, the captains of other ships were asked to send all colonists to the island for quarantine as a preventive measure, even though the authorities reported no infected passengers.

3. The bubonic plague in the Pacific, 1899–1903

The beginning of the new century was marked by the arrival of a new pandemic to the American continent: the bubonic plague. This disease was transmitted to mammals—humans among them—by rodents primarily through the bites of fleas infected with the bacteria *Yersina pestis*, and for the most part was propagated in places infested with rats, such as ports. The epidemic started in Hong Kong in 1894 and spread throughout the world in just a few years. The Americas were one of the last places to be affected by the plague, appearing first in Honolulu (Hawaii) and spreading a few months later to the most important Pacific and Atlantic ports: San Francisco and Rio de Janeiro.

Unlike the yellow fever epidemics of the mid-19th century, this new pandemic arrived at a time when there were more organized health systems in place in many countries, regional agreements on how to act in the case of epidemics, and, particularly, widespread rejection of total quarantines that required the closure of all ports. At the same time, there were important scientific advances: bacteriology was becoming known around the world and accepted in scientific circles. In contrast to previous epidemics, there was a consensus that the illness was caused by a bacillus and that it was one of many preventable diseases, such as cholera, the plague, yellow fever, and typhus (Cueto 1989). Medical discussions had gone beyond the old paradigm of "contagionists" and "anticontagionists." By the beginning of the 20th century, some of the debates among the medical community were related to the way diseases were transmitted, as well as to the identification of the type of bacteria present in the bodies of those who were ill.

However, during this epidemic there were once again debates about the economy versus health, and in some cities such as Buenos Aires, the newspapers *La Prensa* and *La Nación* opined that reports about the pandemic in

the port were exaggerated. As Myron Echenberg (2007) notes, officials from the Argentine National Department of Hygiene, such as Eduardo Wilde, belonged to the old school of sanitation doctors: they were pro-British and convinced of the importance of free trade. This group of professionals, supported by the press, remained silent about the epidemic, denying and covering up its presence, which generated distrust and suspicion within international community.

The epidemic arrived in the southern Pacific in 1903, and Peru was one of the most affected countries: the disease remained within its borders for almost a decade. When discussing possible measures to prevent its entry into the country, various social actors maintained that establishing quarantines was inadequate. Unlike their prevailing opinion during the yellow fever epidemic, Peruvian doctors opposed quarantines. For example, in March 1900 Dr. Julián Arce published a series of articles in *El Comercio* about this new epidemic. When it came to prophylactic measures, Arce noted that the implementation of quarantines and containment policies were destined to disappear with the advance of new medical discoveries. Nevertheless, he recognized that modern containment measures were less deficient than those of the past century since they included preventive strategies such as isolation and disinfection of ships (*El Comercio*, 1900).

Arce (1919) believed that the use of quarantines as a principal measure in fighting epidemics was associated with a series of problems. According to this doctor, isolation did not constitute an unbridgeable barrier for various reasons: the first was that a disease did not always present visible symptoms; thus, those infected were not always identified and there was a risk that they would be allowed to disembark and propagate the disease. Second, the plague was transported not only by human beings but also by animals, primarily rats, which could easily evade quarantine measures and get onto land. Third, quarantines were only put in place when there was official news of the presence of the plague in a given country. Arce referred to certain countries such as Argentina that did not inform the international community until it was too late and it was no longer possible to hide the presence of the disease (*El Comercio*, 1990).

If during past decades quarantines were seen as the most restrictive and prejudicial measures for commerce, the alternative suggested by doctors certainly fueled the debate between the medical community and merchants. Arce spoke out forcefully: "We speak out openly against quarantines as an effective measure to keep the plague out of Peru" (*El Comercio*, 1900, p. 3) and added that the only defense that remained, considering the deplorable sanitary conditions in the country, was the "absolute exclusion from our

ports of every ship coming from an infected place. The measure is violent and prejudicial to a very great degree for commerce, but it would be more prejudicial not to adopt it" (1900, p. 3). Arce noted that while it was a definite economic sacrifice, it was less costly than the spread of the epidemic. He cited the examples of the port cities of Rosario and Santos (Argentina and Brazil) where within a few days various export companies went bankrupt, thousands of people left, and the losses spiraled into the millions of pesos.

At the beginning of 1903, the number of ships in quarantine increased due to the threat the plague posed to Peru. The number of newspaper articles on the need to take more drastic measures also multiplied. In February, *El Comercio* argued that Peru should take precautions similar to those adopted by Bogota's Hygiene Board (Junta de Higiene), establishing quarantine lines with bordering countries affected by the disease and subjecting arriving ships to observation quarantines for a minimum of ten days. The newspaper also added that:

> What is practical and effective in these cases is to turn back the ships coming from ports infected by the bubonic plague; since this is an issue of conserving public health, it is the duty of authorities to implement extreme and radical measures. (*El Comercio*, 1903ª, p. 2)

Despite these efforts, in May 1903, the first cases of the disease were diagnosed in Lima and Callao and it spread rapidly to the rest of the country (Cueto, 1997). The epidemic exacerbated the prejudice against Chinese immigrants, as the demonstrated by the general suspicion of ships arriving from Asia (Palma & Ragas, 2018). For example, in October 1904, the steamship *Kensington* anchored in Callao with 350 Chinese on board, and the decision was made to quarantine it. This measure was taken even though the Director of Health reported that there were no cases of bubonic plague on the ship. Not only were the passengers examined in detail, but their belongings were also disinfected many times by the city's disinfecting stove (*El Comercio*, 1904ª). This action was repeated at other Peruvian ports—such as Salaverry in the north of the country—where some local authorities, fearing the entry of more infected individuals, prohibited ships from docking even though many did not come from infected areas.

At the beginning of 1904, a series of tensions arose between political authorities and steamship companies. In January 1904, Deputy Cortés asked the Chamber of Deputies to pass legislation to lower the cost of maritime transport tickets. He stated that because of the arrival of the bubonic plague at Peruvian ports, it had been decreed that all steamships arriving from infected ports must undergo quarantine and as a result, steamship

companies had increased the price of tickets and cargo transport charges by 20 percent. This measure was kept except for a few months after the quarantine, when it was suspended. According to Cortés, the increase in charges was a form of exploitation by foreign companies in Peru that, despite their large earnings, maintained high prices in order to recuperate their losses in previous months (*El Comercio*, 1904b). The issue of setting prices for fixed itineraries for steamship companies remained controversial in the following years (*El Comercio*, 1906).

Peruvian ports did witness a decrease in maritime traffic in 1903, which can be seen in the major anchorages in the south of the country. For example, authorities closed the port in Ilo in August 1903 to ships coming from the south, which undoubtedly affected the local economy and shipping companies (*El Comercio*, 1903b). In the case of the pier at Mollendo, quarantine measures impacted shipping traffic such that the number of steamships arriving declined to 22 from the annual average of 42 recorded in the period 1900–1901. Nevertheless, in the following years, there was an upturn in the number of ships arriving at the port, and in 1905, the number reached 93. While there was a reduction in commercial traffic during some months, shipping companies were soon able to recover their losses due to the overall increase, in addition to the permanent increase in passenger ticket prices (Elías & Rivera, 2008). The controversy about the importance of commerce versus public health would be repeated during epidemics in future years.

4. Conclusions

During the second half of the 19th century, the use of quarantines underwent important transformations on the international level. They were influenced by free trade and the English System, which privileged sanitary control of travelers and their belongings rather than the closing of ports and quarantining of ships. The objective was to cause the least possible harm to international commerce at a time when the circulation of goods and people generated important income for state coffers. During this period, there were regional and international efforts to formulate maritime sanitation criteria and avoid the global propagation of epidemics.

Latin America was also affected by this process. Starting in 1850, merchants—a sector that was still recovering from the wars of independence—were dissident voices vis-a-vis those who wanted to close the ports as a preventive sanitary measure. Analysis of the yellow fever and bubonic plague epidemics that affected Peru demonstrates that conflicts between local authorities, national and international merchants, and doctors regarding quarantining ships and passengers repeated themselves each time a new

pandemic was confirmed. These measures were often criticized and the central government had to concede when faced with public pressure. As has been shown, the second half of the 19th century witnessed a change in the perception of quarantines, both locally and internationally. Peruvian doctors, who had supported them, began to question their effectiveness. Unlike merchants and owners of shipping companies who wanted free transit of cargo and people, Peruvian doctors proposed more radical actions to protect the public health of the country. Thus, when the bubonic plague arrived at the beginning of the 20th century, influential voices sought to prohibit the docking of all ships arriving from infected ports. A quarantine was not enough.

During this period, on the international level, the foundations were set for medical Pan-Americanism. The organization in the 19th century of conferences and multilateral agreements on maritime sanitation prepared the way for what is known as the first Pan American Sanitary Code (1905), approved at the Second International Sanitary Convention held in October 1905 in Washington. Almost all the countries in the region participated and its mandates were adopted by the vast majority of them. On the local level, there was an effort to put into effect measures that did not affect maritime commerce, such as the building of quarantine stations on islands near the most important ports. Between 1880 and 1910, such stations were established in the United States, Puerto Rico, Argentina, Brazil, Venezuela, and other countries. In Peru, the Isla de San Lorenzo played a crucial role in public health, although, as also occurred in some other cities with high levels of Asian migration, Chinese immigrants and their property were targeted amid an increase in anti-Chinese feeling in the region, underpinned by racial and public health theories.

Analysis of the cases presented here show that discussions about the economic and social costs of the application of quarantines was a constant in the history of health policies, globally and in Latin America in particular. In 2020, in the midst of the SARS-CoV-2 pandemic, various sectors argued—just like a century earlier—that measures that seek to control the mobility of individuals and commerce are hard on the population, especially the poorest sectors. It is still too early to evaluate whether the most extreme quarantine measures such as the closing of borders, air space, and non-essential economic sectors—in the long term—benefitted the population and limited contagion. Peru provides an example: it was one of the first countries to impose a lockdown and close its borders. However, in August 2020, five months after the implementation of these measures, it was one of the countries with the highest rates of contagion and mortality resulting

from SARS-CoV-2 in the region. Undoubtedly, future studies will be able to take advantage of more data in order to evaluate whether or not the public policies implemented were the correct ones.

As Peruvian doctors noted in the mid-19th century, in countries where fiscal revenue was determined by commerce and especially the export of a small numbers of products of natural resources, the pressure exerted by groups of merchants was greater and affected state decision-making related to public health. Today, this tension still exists, and not only in relation to lockdowns. Vaccination and the shortage of vaccines has revived the debate about the social and economic costs of public health policies, as well as the advantages and disadvantages that result from the interference of entrepreneurs and merchants in decision-making related to key aspects of health issues. There is still more to investigate regarding these and other aspects of the history of health and economics in Latin America. The SARS-CoV-2 pandemic has revived interest in learning more about epidemics in the region; we hope that new studies will shed light on additional topics and employ approaches that will allows us to be better prepared for similar events in the future.

References

Álvarez, A. (1999). Resignificando los conceptos de la higiene: el surgimiento de una autoridad sanitaria en el Buenos Aires de los años 80. *História, Ciências, Saúde-Manguinhos*, *6*(2), 293-314.

Álvarez, A. (2004). El rol de los lazaretos en el control del cólera y la fiebre amarilla. Buenos Aires 1870-1915. *História Revista*, *9*(2), 287-317.

Álvarez, A. (2020). La Historia del COVID 19 en tiempos del Coronavirus. Un ensayo inconcluso. *Pasado Abierto, 6*(11), 215-235.

Arce, J. (1919). Sobre la supuesta endemicidad de la fiebre amarilla en la costa del Perú. *Anales de la Facultad de Medicina, 3, 93-133.*

Armus, D. (April 22, 2020). Opinión ¿Cómo se narra el coronavirus? Incertidumbres e historias globales. *Clarin, Revista Ñ*. Retrieved from: https://www.clarin.com/revista-enie/ideas/-narra-coronavirus-incertidumbres-historias-globales_0_ot977nECw.html

Barnes, D. (2014). Cargo, Infection, and the Logic of Quarantine in the Nineteenth Century. *Bulletin of the History of Medicine*, *88*(1), 75-101.

Bashford, A. (2002). At the Border Contagion, Immigration, Nation. *Australian Historical Studies*, *33*(120), 344-358

Bashford, A. (2016). Maritime Quarantine: Linking Old World and New World Histories. In *Quarantine. Local and Global Histories* (pp. 1-12.). London: Palgrave.

Booker, J. (2007). *Maritime Quarantine: The British Experience*. Aldershot: Ashgate.

Carter, Eric., & Lopéz, M. (Arpil 18, 2020). Facetas de una pandemia en el siglo XXI: América Latina y el coronavirus. *Historia + Salud. Red de historia de la salud. Blogueando desde Latinoamérica.* Retrieved from http://historiasalud.cl/facetas-de-una-pandemia-en-el-siglo-xxi-america-latina-y-el-coronavirus/

Chase-Levenson, A. (2020). *The Yellow Flag: Quarantine and the British Mediterranean World, 1780-1869*. Cambridge: Cambridge University Press.

Contreras, C. (Ed.). (2011). *Compendio de Historia Económica del Perú IV: Economía de la primera centuria independencia*. Lima: Instituto de Estudios Peruanos and Banco Central de Reserva del Perú.

Cueto, M. (1989). *Excelencia científica en la periferia: actividades científicas e investigación biomédica en el Perú 1890-1950*. Lima: Grupo de Análisis para el Desarrollo.

Cueto, M. (1997). *El regreso de las epidemias: salud y sociedad en el Perú del siglo XX*. Lima: Instituto de Estudios Peruanos.

Cueto, M. (2004). *El valor de la Salud Historia de la Organización Panamericana de la Salud*. Washington D.C: Organización Panamericana de la Salud.

Cueto, M., & Palmer, S. (2015). Medicine and Public Health in Latin America: A History. New York: Cambridge University Press.

Deustua, J. (2011). Guano, salitre, minería y petróleo en la economía peruana, 1820-1930. In C. Contreras (Ed.). *Compendio de Historia Económica del Perú IV: Economía de la primera centuria independencia* (pp.165-237). Lima: Instituto de Estudios Peruanos and Banco Central de Reserva del Perú.

De Los Ríos, M. (1868). Informe al Ministro de Estado en el despacho de Beneficencia. En *Memoria del Ministro de Estado en el Despacho de Justicia, Instrucción Pública, Culto y Beneficencia* (pp. 62-64). Lima: Imprenta del Estado.

Echenberg, M. (2007). *Plague Ports. The Global Urban Impact of Bubonic Plague, 1894-1901*. New York: New York University Press.

El Comercio. (March 13, 1900). Inserciones: La Plaga Bubónica*,* 3.

El Comercio. (April 7, 1902). Exterior: Cartas Mejicanas, 2.

El Comercio. (February 11, 1903ª). Crónica: La bubónica, 2.

El Comercio. (August 18, 1903b). Crónica: La peste bubónica, 3.

El Comercio. (October 22, 1904ª). Callao: Los Chinos, 3.

El Comercio. (January 11, 1904b). Congreso Extraordinario, Cámara de Diputados, sesión del lunes 11 de enero de 1904, 1.

El Comercio. (January 24, 1906). Diario de los debates, Congreso Extraordinario, Cámara de senadores, 5ª sesión del miércoles 27 de diciembre de 1905, 5-8.

Elías y Rivera, G. (2008). *El Comercio marítimo en el sur del Perú*. Lima: Instituto Latinoamericano de Cultura y Desarrollo.

Eyzaguirre, R. (1906). Las epidemias amarilicas de Lima. Apuntes para la Historia de la fiebre Amarilla en América. *Boletín del Ministerio de Fomento. Dirección de Salubridad Pública, 2*(8), 1-109.

Fernández, A. (March 23, 2020). *Alberto Fernández: «Si el dilema es la economía o la vida, yo elijo la vida»*. Perfil. Retrieved from https://www.perfil.com/noticias/politica/alberto-fernandez-si-el-dilema-es-la-economia-o-la-vida-yo-elijo-la-vida.phtml

García, F. (1879). *Diccionario de la legislación peruana* (tomo I). Lima and París: Librería de Laroque.

García, U. (2002). El cólera en la historia de la medicina social peruana: comentarios sobre un decreto precursor. *Revista Peruana de Medicina Experimental y Salud Pública*, *19*(2), 97-101.

Harrison, M. (2012). *Contagion. How commerce has spread disease*. New Haven: Yale University Press.

Illanes, M. A. (1993). *En el nombre del pueblo, del estado y de la ciencia: historia social de la salud pública, Chile, 1880-1973: hacia una historia social del Siglo XX*. Santiago de Chile: Colectivo de Atención Primaria.

Inga, S., & Carcelén, C. (2020). La epidemia de fiebre amarilla en el puerto del Callao durante 1868. *Espiral, revista de geografías y ciencias sociales*, *1*(2), 183-195.

International Union of the American Republic. (1903). *Transactions of the First General International Sanitary Convention of the American Republic*. Washington D.C: Government Printing Office.

International Union of the American Republic. (1906). *Transactions of the Second General International Sanitary Convention of the American Republic*. Washington D.C: Government Printing Office.

Lee, E., & Yung, J. (2010). *Angel Island: Immigrant Gateway to America*. New York: Oxford University Press.

López, R. (1858). *Cuarentenas* (profesional degree thesis). Universidad Nacional Mayor de San Marcos, Lima, Perú.

Lossio, J. (2003). *Acequias y Gallinazos. Salud ambiental en Lima del siglo XIX*. Lima: Instituto de Estudios Peruanos.

Llorca-Jaña, M. (2014). The impact of early nineteenth-century globalization on foreign trade in the Southern Cone: A study of British trade statistics. *Economic History Research*, *10*(1), 46-56.

Maglen, K. (2014). The English System: Quarantine, Immigration and the Making of a Port Sanitary Zone. New York: Manchester University Press.

Mariátegui, R. (1957). *El Callao: Asilo de las leyes y la libertad*. Lima: Talleres Gráficos Cecil.

Markel, H. (1999). *Quarantine! East European Jewish Immigrants and the New York City Epidemics of 1892*. Baltimore: Johns Hopkins University Press.

Mayne, A. (2008). Guardians at the gate: Quarantine and racialism in two Pacific Rim portcities, 1870-1914. *Urban History*, *35*(2), 255-274.

Márquez, M. (2002). *La cooperación de la Organización Panamericana de la Salud / Organización Mundial de la Salud de Cuba 1898-1996*. Cuenca: Ediciones Universidad de Cuenca.

Mcleod, M. (2010). We Cubans Are Obligated Like Cats to Have a Clean Face: Malaria, Quarantine, and Race in Neocolonial Cuba, 1898-1940. *The Americas*, *67*(1), 57-81.

McNeill, J. R. (2010). *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620-1914*. Cambridge: Cambridge University Press.

Muñoz, A. (1888). Congreso Sanitario Americano. *La Crónica Médica, 5*(50), 41-66.

Organización Internacional del Trabajo. (2018). *OIT: Cerca de 140 millones de trabajadores en la informalidad en América Latina y el Caribe*. Retrieved from: https://www.ilo.org/americas/sala-de-prensa/WCMS_645596/lang—es/index.htm#:~:text=La%20tasa%20de%20informalidad%20de,ni%20por%20la%20seguridad%20social

Palma, P., & Ragas, J. (2018). Enclaves sanitarios: Higiene, epidemias y salud en el Barrio Chino de Lima (1880-1910). *Anuario Colombiano de Historia Social y de la Cultura*, *45*(1), 159-190.

Palma, P., & Ragas, J. (2019). Desenmascarando a los impostores: Los médicos profesionales y su lucha contra los falsos médicos en Perú. *Salud Colectiva, 15*, 1-14.

Parker, D. (1998). Civilizing the City of Kings: Hygiene and Housing in Lima. In R. Pineo & J. Baer. (Eds.). *Cities of Hope, People, Protest and Progress in Urbanizing Latin America, 1870-1930* (pp.153-177). Colorado: Westview Press.

Paz Soldán, C., & Lorente, S. (1924). *Cien años de política sanitaria marítima en el Perú*. Lima: Imprenta del Asilo Víctor Larco Herrera.

Piñera, S. (May 1, 2020). *Presidente Piñera llama a "salir de cuarentena" para aplacar crisis económica*. Radio U Chile. Retrieved from https://radio.uchile.cl/2020/05/01/presidente-pinera-llama-a-salir-de-cuarentena-para-aplacar-crisis-economica/

Ramón, G.(1999). *La muralla y los callejones. Intervención urbana y proyecto político en Lima durante la segundad mitad del siglo XIX*. Lima: PromPerú and Sidea.

Ríos, C. (1914). *Arica en el presente i en el porvenir. Su saneamiento*. Santiago de Chile: Imprenta La Ilustración.

Schiappacasse, P. (2014). Welcome to isolation! Lazareto de Isla de Cabras, the first permanent quarantine station in 19th century Puerto Rico. *The Grog, A Journal of Navy Medical History and Culture*, 41, 10-16.

Schiappacasse, P. (2016). The Development of a Maritime Quarantine System in 19th Century Spanish Puerto Rico as a Response to Epidemics and Pandemics. In J. Vögele, S. Knöll & T. Noack (Eds.). *Epidemien und Pandemien in historischer Perspektive: Epidemics and Pandemics in Historical Perspective* (pp. 103-116). Wiesbaden: Springer.

Shah, N. (2001). Contagious Divides: Epidemics and Race in San Francisco's Chinatown. Berkeley: University of California Press.

Shah, N. (2016). The Empire of Medical Investigation on Angel Island, California. In A. Bashford (Ed.). *Quarantine. Local and Global Histories* (pp.103-120). London: Palgrave.

Stewart, W. (1951). Chinese Bondage in Perú. A History of the Chinese Coolie in Perú, 1849- 1874. Durham: Duke University Press.

Templeman & Bergmann. (1870). Muelle Dársena. Refutación del folleto de los agentes y comerciantes del Callao. Lima: Tipología de «El Comercio».

Vargas, P. (May 24, 2020). *De cuarentenas y «lazaretos»: COVID-19 y Peste bubónica en el Perú*. Retrieved from https://grupodetrabajohistoriasiglo20.blogspot.cuarentenas-y-lazaretos-covid-19y.html?m=1&fbclid=IwAR3LB2P1EFFMtin0NzPyulpWPFThlZIYwr0QYoUOLPCOQ-Ffd_vWmaCYvj0