

Chapter One: The Lancet and Licensed Medicine, The Early Years (1804-1821)

Introduction

Secretary Tomás Romay's summary of the activities of the Central Vaccine Board for the members of colonial Cuba's prestigious Economic Society in December of 1835 was bittersweet. Since the introduction of smallpox vaccination in 1804, officials boasted a total of 311,342 vaccinated persons over the last 31 years. Yet overall tallies obscured more troubling fluctuations over time; the fact that since the early 1820s, the number of persons vaccinated had dwindled to a mere thousand or so per year was probably a most glaring omission for those few vaccinators present.

These alarming downturns in activity on the part of the vaccination board and the high percentage of the population subsequently left vulnerable to smallpox were only tangentially addressed. Instead, the secretary emphasized the positive. Romay insisted that in the long term, vaccination had not only "preserved the inhabitants of this island from the most deadly and generalized of diseases [smallpox]"; it had also "augmented the population, fomented agriculture, increased commerce, industry and the arts, and in this land privileged by nature, the level of prosperity and opulence that is its destiny."¹ The faculty present was to be especially praised for their professional contribution to this achievement in public health. Even if "[our] hopes have not been fulfilled, if the number of vaccinated persons progressively diminishes when it should increase, this has not been a result of any defect of zeal or constancy on the part of vaccinators."² In fact, after 31 years of hard work "the Central Junta abound[ed] with faculty members distinguished by their experience, understanding and practice", more than capable of taking charge of the organization upon his departure.³

Romay's closing address to his medical colleagues in December of 1835 is testimony to both the opportunity and daunting challenge that the introduction of smallpox vaccination offered to a growing medical elite in colonial Cuba. Acquired through a chance visit to Havana by vaccinated children from Puerto Rico in February of 1804, the vaccine arrived at a propitious time in the island's history. During the late 18th and early 19th centuries, a core group of creole and peninsular intellectuals witnessed an economic and social transformation of unprecedented proportions. From the fairly diversified agricultural economy and low population characteristic of colonial peripheries, the island's economy and social structure was converted into a brutal and cosmopolitan slave society. In densely packed port cities such as Havana, the resulting population growth from immigration, natural increase and the slave trade facilitated the spread of disease.

Figure 1: Portrait of Dr. Tomás Romay y Chacón



It was the danger that disease posed to the island's economy and the rise of a trend in preventive medicine based on scientific precepts in Europe that allowed a growing number of elite creole physicians new professional and public functions in colonial Cuba. As "one of the

first milestones in the advancement of preventative medicine,” vaccination inspired some of the first attempts to combat disease at the national level in many countries.⁴ It also opened doors to the early exercise of expert medical authority for revalued concepts of popular health. Using the Spanish colony of Cuba as a case study, this chapter uncovers the processes by which an interest group emerged in the wake of the vaccine’s introduction to engage the state in a struggle for privilege and status as bearers of the public good. Elite Cuban creoles and Spanish colonial reformers collaborated closely in their joint project to domesticate the technology of smallpox vaccination on the island after its introduction in 1804. Spearheaded by creole medical ‘high priest’ Dr. Tomás Romay y Chacón, the Central Vaccine Board of Havana became a center for licensed, medical practitioners to access new medical, professional platforms. Institutionalization of the service and the medical professionalization it fostered helped support claims of socio-political and economic relevance with direct intervention upon a significant percentage of the colonial population. Framed as a sacred obligation with humanitarian objectives, their medical mission was adapted to meet the needs of creole socioeconomic elites and dovetailed with imperial objectives to augment productivity for empire.

The Problem of Smallpox in Colonial Cuba

On the advent of the introduction of smallpox vaccination to the Spanish Americas in the early nineteenth-century, smallpox was a well-known and little controlled scourge of the Caribbean. Arriving to the Americas with the ships of Spanish conquest in the early 16th century, the disease decimated native populations.⁵ As trade and communications increased and more importantly, as African slaves were imported to meet labor needs, the re-introduction of smallpox to ports across the Caribbean became intimately associated with the slave trade that

sustained commodity production on the plantation model.⁶ Though variola inoculation was widely practiced throughout Western and Central Africa, the social displacement, malnutrition, and overcrowding which accompanied the trade facilitated the spread of disease. Intensification of the trade was felt in the frequency of epidemics, particularly after the mid-seventeenth century development of slave-based plantation systems in the new British and French Caribbean. In Cuba, where the disease had not been seen for decades, smallpox caused great mortality amongst the African slave population in a flurry of epidemics from 1677 to 1684 and again in 1693.⁷

The advent of Cuba's own export revolution almost a century afterwards added urgency for solutions to the increasingly frequent epidemics ravaging the major port cities of Cuba. Precipitated by enlightened Bourbon trade policies and the fall of Saint-Domingue as a competitor in the sugar market, Cuban exports in primary goods boomed during the last three decades of the eighteenth century.⁸ Meeting the demand for sugar, coffee and tobacco production, as well as the growing urban industries thriving on the trade, required labor. In 1763, a brief occupation of the city by the English prompted Spanish authorities to reverse previous restrictions on large-scale importation of enslaved Africans. Between 1774 and 1792 the slave population increased from 44,000 to 85,000 persons, representing a jump from 26 to 31 percent of the total population. Over the next forty years, particularly as the labor-intensive sugar economy expanded, hundreds of thousands more were imported so that by 1827, the island's 287,000 slaves constituted an unprecedented 41 percent of the total population.⁹ On the eve of the introduction of smallpox vaccination in February of 1804, Cuba (particularly its western region) was incorporated into a global network as an importer of slaves to produce commodity agricultural goods for export.

Figure 2: Growth of the sugar industry, 1790 to 1825.¹⁰ Concurrent growth in the tobacco and coffee industries, which also employed large numbers of slaves, was equally dramatic.

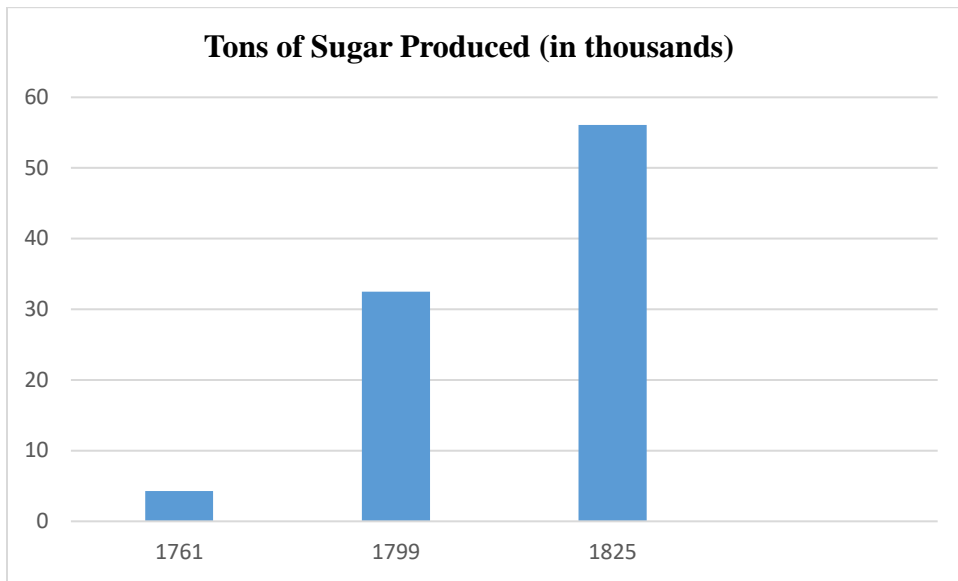
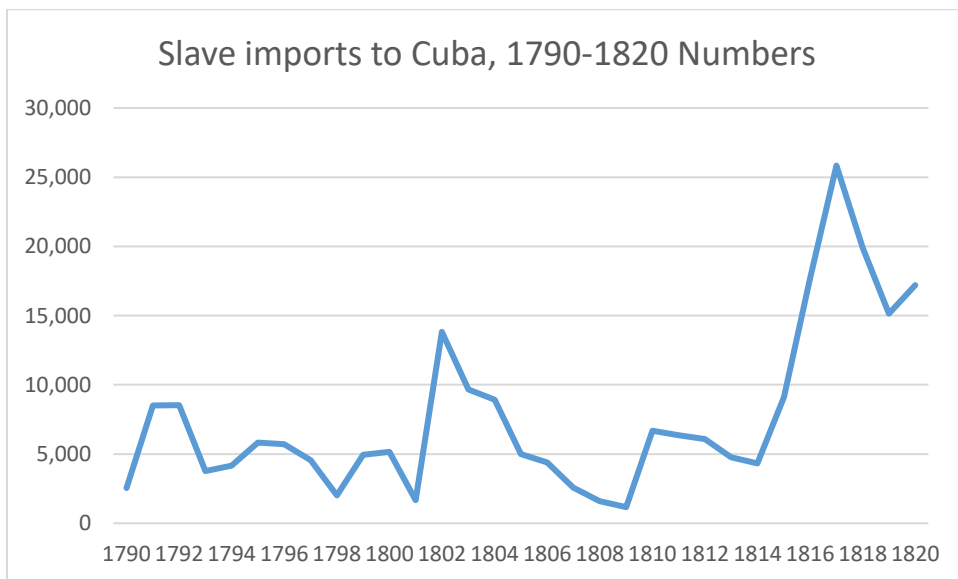


Figure 3: Slave imports to Cuba, 1790-1820.¹¹



These transformations had a profound impact on the major port city of Havana.¹² Dramatic demographic growth linked to the export sector was augmented by subsequent

militarization of the colony, which brought tens of thousands of Spanish soldiers and administrators to Havana's shores in order to maintain order and defend colonial claims in the new economy. The city expanded beyond the old walls and its center pulsed with the movement of people, animals and goods of all kinds, including massive quantities of bulky exports.¹³ As Prussian scientist Alexander von Humbolt noted during his travels to the island at the turn of the nineteenth century, the circulatory systems of increasingly congested streets and thoroughfares were generally muddy, foul-smelling and insalubrious.¹⁴ It was in this context that epidemic disease made its most dramatic appearance. Regular bouts of measles, influenza, and yellow fever periodically spread panic amongst the population and directly interfered with economic growth. Smallpox, that "ancient scourge of the colony," precipitated epidemic emergencies at least once every seven to nine years, burning on the combustible fuel of non-immune children and newly arrived adult slaves to carry it through city and countryside.¹⁵

Such a situation worked to the advantage of licensed practitioners who were overwhelmingly concentrated in Havana and its immediate rural hinterlands. The dynamism of the slave-driven economy and the influx of epidemiologically vulnerable populations in a city infamous for its unhealthy conditions opened opportunities for healers in the private sphere. In rural outskirts, the insatiable demand for African slaves and the abysmal working conditions associated with the export sector created employment for itinerant and regular surgeons and physicians on plantations.¹⁶ In the city, disease etiologies emphasizing local conditions and personal habits made local experts the ultimate reference for those stricken with diseases like yellow fever, which preyed almost exclusively upon the non-immune European population. Across both city and countryside, the bodies of soldiers, the urban poor, and slaves provided doctors with fodder for clinical experience, experimentation and autopsy.¹⁷ However, as intense

urbanization, militarization and commodity production spurred medical professionalization on the island, the influence of licensed practitioners in the public realm remained slight, especially in the struggle against regular scourges such as smallpox.

Prior to the introduction of vaccination on the island in 1804, various preventive measures were employed to halt the advance of a smallpox epidemic. Because re-introductions of smallpox very often accompanied incoming slave ships, maritime quarantine was considered the easiest means of preserving populations against possible epidemics and was the technique most frequently utilized.¹⁸ In theory, if the epidemic was severe enough, other more cumbersome and controversial measures were available to authorities. Land quarantine could separate contagious persons from the larger population. Royal promulgations throughout the eighteenth century advocated the construction of isolation houses (*degredos*) in which “[individual] smallpox victims [could be] maintained with utmost care and gentleness, assuring that all the precautions to avoid contagion are met”.¹⁹ If larger numbers of people were affected, *cordones de sanidad* (or forced quarantine) also had the potential to restrict the possibilities of disease transmission between communities. However, the expense and inconvenience of these latter options made them of little recourse and indeed, with few exceptions, land quarantine was rarely implemented against the pox during the colonial period.

In April of 1785, a royal promulgation concerning smallpox control reached Cuba which advocated inoculation with smallpox virus, a procedure only recently sanctioned by the Spanish Crown.²⁰ The procedure consisted of taking matter from the pustule of a person infected with a relatively mild form of the disease and transferring it to the punctured skin of a healthy person. Supporters across the Atlantic world hoped that in this way the relatively benign case that resulted could be treated with ease and by a licensed practitioner. Disseminated throughout Latin

America during the second half of the eighteenth century, inoculation was successfully adopted amongst elite sectors in the colony and a small group of specialists quickly sprang up in the major port cities of Havana and Santiago to meet demand.²¹ By the turn of the nineteenth century, the relative merits of inoculation were being publicly debated in the recently inaugurated *Papel Periodico*, leading the Cuban medical patrician of the period to judge the procedure “so generally good, that even its most acerbic detractors could not but admit its usefulness.”²²

Despite the abundance of royal and municipal statutes proscribing rigorous quarantine measures and the growing acceptance of inoculation by leading patricians, authorities were generally less than successful in preventing or containing smallpox epidemics during the seventeenth and eighteenth centuries. Hundreds of miles of shoreline and a widespread and lively contraband trade made maritime quarantine logistically difficult for an island colony such as Cuba.²³ Inoculation with smallpox virus, while it lay a promising foundation for the understanding and practice of preventive medicine, was controversial and unpopular in Cuba and in other circum-Caribbean contexts.²⁴ The risk of suffering a severe bout with inoculation and the need for isolation of contagious individuals terrified people enough to prevent utilization of the preservative on a large scale.²⁵ Combined with the myriad deficiencies of an unresponsive colonial administration and the general hostility towards strict adherence to any preventive measures that could negatively impact trade, the possibilities for effectively curbing the increasingly frequent epidemics were few.

Vaccination offered much potential for effective prevention and for a different conceptualization of professional medical authority at the turn of the nineteenth century. In 1796, the English physician Edward Jenner (re)discovered that inoculation with material from cattle

infected with cowpox (the more benign bovine virus related to smallpox) provided an effective protection against smallpox and could be used as a preventive.²⁶ Although difficult to preserve, transport, and disseminate through the dominant method of human arm-to-arm transmission (see Chapter Two), the procedure had several important advantages over inoculation. It required a relatively simple operation and was cheap to administer. Vaccination had comparatively benign side effects, inducing the formation of a pustule where doctors ‘scratched’ cowpox material onto select sites of the body. While these could be accompanied by mild fever and soreness at the site of application, the vaccinated did not experience a generalized eruption of characteristic smallpox pustules and the more severe symptoms associated with mild cases of smallpox. Cowpox was also not contagious, making vaccination a much more targeted intervention that did not necessitate controversial measures of quarantine.

This “first great social application of medicine” could serve not merely as a weapon to combat smallpox epidemics, but was also the “basis for *prevention* of disease and thus an antidote for the profit incentive that had traditionally motivated doctors.”²⁷ As a preventive that necessitated medical intervention upon large populations on an individual level, vaccination offered the possibility of expanding the reach of licensed practice amongst the population(s) and the opportunity of defining the ‘public’ in epidemiological terms. The new medical technology also presented opportunities for licensed medical elites to further discourses of a ‘humanitarian’ medical ethic and assert professional clout against the diversity of mostly unlicensed competitors in the colony. As a comparatively effective preventative against one of the most dangerous scourges of the circum-Caribbean, licensed creole practitioners could hope to use vaccination to create more active dialogue with state and ecclesiastical authorities and gain more regulatory power over the profession of healing itself.

Public Power and Medical Professionalization Before the Vaccine

Until the advent of vaccination on the island in 1804, few important public institutions existed to offer the few licensed physicians that settled on the island any opportunity to regulate the profession and/or intervene on behalf of the public(s) health. Those regulatory institutions that did exist often carried little concrete power. Spanish legislation regarding medical matters dated from Roman times and was based on the principle that it was the State/Crown's obligation to intervene in the medical marketplace in order to assure that licensed medical practitioners were available to the population. According to historian of medicine John Lanning, “[for the Spaniards] nothing was more relevant to public health than the proper education, examination and licensing of doctors, the inspection of apothecary shops, the prevention of false or dangerous medical publications, the enforcement of medical laws, and the suppression of quackery.”²⁸

Since at least the days of Alfonso the Learned (1252-84), a small tribunal of Crown physicians composed what became known as the *proto-medicato*, which regulated the medical sphere and served as the highest court in cases involving the art and science of healing on the peninsula.²⁹ Through successive reorganizations in the fifteenth and sixteenth centuries, the *proto-medicato*'s power and jurisdiction over medical practice and practitioners increased in volume and vitality. As Spaniards across the Americas sought to reproduce those regulatory institutions which set the framework for “civilized,” urban life, over a half dozen *proto-medicatoros* were eventually established throughout the major cities of the Spanish empire, including Havana.³⁰

Even in major towns and/or cities where tribunals did not exist, *proto-medicos* or “public” physicians could be hired as consultants to municipal authorities seeking to curb illegal

medical practice. Contracts between municipalities and individual physicians could also require physicians to attend to the needy populations of growing urban centers, make rounds in hospitals or, in port cities, inspect quarantined ships.³¹ By the eighteenth century, the (sometimes forced) retention of such physicians in growing cities such as Quito, Bogotá, Buenos Aires, Santiago de Cuba became commonplace. In cases of epidemic emergency, pre-eminent practitioners could also be called upon to serve on city health councils, institutionalized as *Juntas de Sanidad* in early eighteenth century Spain. Together with agricultural, commercial and political leaders, physicians on these mixed councils offered advice on quarantine and sanitary controls until the specter of disease had passed over the population.³² Satisfactory service in hospitals, the retention of elite clientele or even the simple advantage of licensure in an environment where...

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¹ Tomás Romay Chacón, “Resumen de las tareas de la junta de vacuna,” in *Obras Completas*, comp. José López Sánchez (Havana: José Maceo ECAG, 1965), 318. Little documentation is left from the many participants in colonial Cuba’s early nineteenth century medical community, especially with relation to vaccination. Romay’s prolific writings, combined with his numerous administrative positions and status in the Cuban creole medical community, make him a comparatively fertile source of primary source material. Much of this chapter is based upon careful compilations of Romay’s written work by Cuban scholar José López Sánchez.

² *Ibid.*, 319.

³ *Ibid.*, 320. This was to be his last address as Secretary of the Vaccine Board.

⁴ Carl J. Pfeiffer, *The Art and Practice of Western Medicine in the Early Nineteenth Century* (Jefferson: McFarland & Co., 1985), 80.

⁵ José G. Rigau Pérez, “Smallpox Epidemics in Puerto Rico during the Prevaccine Era, 1518-1803,” *Journal of the History of Medicine and Allied Sciences* 37 (October 1982): 424. The first outbreak in both Cuba and Puerto Rico

can be traced to 1518, to which it had spread from neighboring Hispaniola. The epidemic's toll on indigenous populations was dramatic by all accounts, taking from one to two thirds of the indigenous inhabitants from neighboring islands.

⁶ For a review of the literature concerning the introduction of smallpox to the ports of the Greater Antilles and the sugar plantations of Brazil, see Dauril Alden and Joseph Miller, "Out of Africa: The Slave Trade and the Transmission of Smallpox to Brazil, 1560-1831," *Journal of Interdisciplinary History* 18, no. 2 (Autumn 1987): 196-198 and David Henige, "When Did Smallpox Reach the New World (And Why Does It Matter)?" in *Africans in Bondage: Studies in Slavery and the Slave Trade*, ed. Paul E. Lovejoy (Madison: University of Wisconsin Press, 1986), 11-26. For the epidemiology of smallpox in central and southern Africa and how it differed significantly from patterns in Europe and well-communicated ports in the Atlantic world, see also Eugenia W. Herbert, "Smallpox Inoculation in Africa," *The Journal of African History* 16, no.4 (1975): 539-559.

⁷ Rigau Pérez, "Smallpox Epidemics," 426.

⁸ For a thorough examination of the dynamics of the Cuban sugar-industrial complex from the late eighteenth through the nineteenth centuries see the classic by Manuel Moreno Fraginals, *El ingenio: Complejo económico-social cubano del azúcar* (Havana: Editorial de Ciencias Sociales, 1978). For an analysis of the slave trade which fed the export boom, see Laird Bergad, Fe Iglesias García and María del Carmen Barcia, *The Cuban Slave Market, 1790-1880* (New York: Cambridge University Press, 1995).

⁹ Laird Bergad, *The Comparative Histories of Slavery in Brazil, Cuba and the United States* (New York: Cambridge University Press, 2007), 17-18. See also David Eltis, *Economic Growth and the Ending of the Transatlantic Slave Trade* (New York: Oxford University Press, 1987), 245.

¹⁰ Leví Marrero, *Geografía de Cuba* (Havana: La Moderna Poesía, 1981), 213.

¹¹ David Eltis, "The Nineteenth-Century Transatlantic Slave Trade: An Annual Time Series of Imports into the Americas Broken Down by Region," *Hispanic American Historical Review* 67, no. 1 (1987): 122-123 and David R. Murray, *Odious Commerce: Britain, Spain, and the Abolition of the Cuban Slave Trade* (Cambridge: Cambridge University Press, 1980), 18.

¹² From 1792 to 1817, the population of Havana grew from just over 51,000 residents to over 84,000. The population would subsequently triple during the next 10 years, reaching a total of 237,828 persons in 1827. Jacobo

de la Pezuela y Lobo, *Diccionario geográfico, estadístico e histórico de la isla de Cuba* (Madrid: Imprenta del Establecimiento de Mellado, 1863), 1:231.

¹³ Dick Cluster and Rafael Hernández, *The History of Havana* (New York: Palgrave Macmillan, 2008), 36-37.

¹⁴ Alfonso Quiroz, "The Scientist and the Patrician: Reformism in Cuba," in *Alexander Von Humboldt: From the Americas to the Cosmos*, ed. Raymond Erickson, Mauricio A. Font and Brian Schwartz (New York: Bildner Center for Western Hemispheric Studies, 2003), 111-127.

¹⁵ Goodgall, *Ciencia y científicos en Cuba colonial*, 141.

¹⁶ At least during the early nineteenth century, many if not most of these surgeons and physicians were of foreign origin, drawn by opportunities for work and clinical experience on expanding slave plantations. See Adrián López Denis, "Disease and Society in Colonial Cuba, 1790-1840" (PhD diss., University of California, Los Angeles, 2007), 66-70.

¹⁷ Steven Palmer, "From the Plantation to the Academy: Slavery and the Production of Cuban Medicine, 1800-1880," in *Health and Medicine in the Caribbean, 1800- 1968*, ed. Steven Palmer, Juanity de Barros, and David Wright (N.Y.: Routledge, 2009), 56-83. See also López Denis, "Disease and Society," 66-70.

¹⁸ Ramírez, *La mayor hazaña médica*, 88-89. Together with vaccination, quarantine continued to be a primary intervention for public authorities throughout the colonial period. The small group of elite physicians which performed "public" services in Havana, including Romay, made quarantine inspection a part of their rounds.

¹⁹ "Circular de Carlos III," April 15, 1785, Indiferente General, File 1335, Archivo General de Indias, Seville, Spain (hereafter AGI), cited in Ramírez, *La mayor hazaña médica*, 92.

²⁰ Well-known amongst elite circles throughout Europe since its introduction to England from Turkey by Mary Wortley Montagu in 1718, inoculation did not enjoy official sanction amongst the aristocracy in Spain for much of the eighteenth century. Charles IV, a steadfast reformer who very much believed in the benefits of inoculation, was the first in the Spanish royal house to energetically promote it, having his own children inoculated in 1798. Donald Hopkins, *Princes and Peasants: Smallpox in History* (Chicago: University of Chicago Press, 1983), 224.

²¹ Ramírez, *La mayor hazaña médica*, 101-113.

²² Tomás Romay Chacón, "Satisfacción a la duda que se propuso sobre viruelas," in *Obras Completas*, 152.

²³ For the implications of this reality on the illegal slave trade see Hugh Thomas, *Cuba: The Pursuit of Freedom* (New York: Harper & Row, 1971), 164-165.

²⁴ See for example, Martha Few, *For All of Humanity: Mesoamerican and Colonial Medicine in Enlightenment Guatemala* (Tuscon, AZ:University of Arizona Press, 2015): 133-164.

²⁵ Ramírez, *La mayor hazaña médica*, 108-111. Mortality rates for inoculated persons varied from one to three percent. This figure, in comparison to twenty to thirty percent mortality in naturally occurring smallpox, led several medical authorities in both Spain and Cuba to lobby for its widespread adoption. Yet the dangers it posed and the dislocation it caused within communities made the procedure unenforceable as a preventive measure.

²⁶ Carl J. Pfeiffer, *Art and Practice*, 80-81. That cowpox (or some similar bovine eruption) conferred some immunity to working people in the dairies had been noted by observers prior to Jenner's work, but he was the first to experimentally investigate, technically develop and publicize the information for the wider public.

²⁷ José López Sánchez, *Tomás Romay and the Origin of Science in Cuba* (Havana: Centro de Estudios Marxistas, 1967), 85.

⁵ John Tate Lanning, *The Royal Protomedicato: The Regulation of the Medical Profession in the Spanish Empire*, ed. John Jay Tepaske (Durham: Duke University Press, 1985), 11.

⁶ *Ibid.*, 15.

⁷ Pilar Gardeta Sabater, "El nuevo modelo del Real Tribunal del Protomedicato en la América española: Transformaciones sufridas ante las Leyes de Indias y el cuerpo legislativo posterior," *DYNAMIS* 16 (1996): 237-259. Spain's relatively stringent requirements of licensure and university training for the practice of medicine were well known throughout Europe. High educational standards contributed much to the scarcity of physicians in the Indies.

³¹ Lanning, *The Royal Protomedicato*, 36-45. The obligations, salary, and any particular concessions for such posts varied widely from city to city.

³² José Javier Viñes, *La sanidad española en el siglo XIX a través de la Junta Provincial de Sanidad de Navarra, 1870-1902* (Navarra: Departamento de Salud, 2006).