THE MAKING AND TAKING OF "INDIAN MEDICINE": RACE, EMPIRE, AND MEDICAL KNOWLEDGE

IN COLONIAL MEXICO

by

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This dissertation analyses the rise, fall, and rebirth of Spanish interest in indigenous medical knowledge in New Spain across the sixteenth, seventeenth, and eighteenth centuries. Initial interest in integrating native medical knowledge into the European canon disintegrated by the 1600s as central Mexican native institutions continued to decline and as colonial leaders became increasingly convinced that satanism permeated native culture. However, in the eighteenth century professional physicians fought ecclesiastic institutions for jurisdiction of population health, while at the same time urban popular medical markets were claiming new legitimacy for “Indian medicines.” Medical syncretism was nothing new in the colony, yet these professionals now aimed to sever the (in their minds) sullied, mongrel networks of popular medical exchange and install themselves as the regulators of medical fusion. Soon they were celebrating native
medical knowledge as the solution to humanity’s most pernicious woes, the colony’s stagnation, and their professional standing in the republic of letters.

This dissertation argues that this vogue for “Indian medicine” evidenced a broad and radical transformation in the ideological place of “Indios” within the colony, one that prefigured subsequent national conceptions. This shift brought professionals in contact and conflict with the plethora of syncretic medical cultures of New Spain through expeditions, experimental trials, and new institutions aimed at gathering native knowledge. This dissertation examines these networks of exchange, illuminating the means and methods, the barriers and negotiations, and the successes and failures of state-sponsored medical syncretism. I argue that colonial agents did not have the upper hand in their dealings with subaltern healers; indeed, Amerindian communities cannily bartered their highly valued secrets and were quick to abort transactions if the conditions were not in their favor. The consequence of professional blunders, imperial power relations and local politics, and contemporary scientific methodologies was that the project to redeem “Indian medicine” resulted in ignorance as much as, if not more than, viable knowledge.
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Dedication

To my parents, for letting me go my own way

And to David Thelen
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Introduction

On June 2nd of 1782 María Paula, a native resident of Mexico City, began a novel regime at the Royal Indian Hospital. Thirty-six years old and widowed, she arrived at the Indian Hospital with “her entire body and its extremities covered in humid pustules that appeared venereal.” In prior decades, she likely would have avoided the Indian Hospital and headed instead for the syphilis hospital, San Juan de Dios, which had much less of a reputation for abuse. But amongst the reformist campaigns of the 18th century was resegregation of the infirm, and now that hospital was strictly for Spaniards. Perhaps, too, she was hoping to avoid the scorn and scars of the mal de bubas and was holding out for it to be something less severe, less ruinous. There is no indication that María Paula was asked to participate in the test (which would have been quite out of keeping anyway). Instead, her physician, Alejo Ramón Sánchez, put her on a regime of two raw, skinned, beheaded lizards a day, “the same way as the Indians of Amatitlán [purportedly took them].” Each day it was the same – copious sweating, nausea, headaches – but it was working. Little by little the pustules dried and receded. On day five Sánchez declared the test a flying success and María Paula was sent on her way. That was when things with the test were still going well.

Sánchez and the current administrators of the Indian Hospital were keen on transforming the Indian Hospital from a decrepit afterthought of the crown’s charity into a vanguard research hospital, where the bodies of the dying and ill could be put to good use. They installed an anatomical theater for public dissections in the main patio (the only one in the colony) and, in alliance with the Royal and Pontifical University and the
Hospital of San Andrés, the other research hospital, began conducting drug trials. The lizard remedy was a favorite, reputed to be a secret “miracle cure” known by the Indians of western Guatemala since time immemorial. ¹ But despite the strong beginning, the test started going downhill. By the end of September doctor José Francisco Prada had to report to the Protomedicato – the foremost medical authority in the land – that “almost all of the sick who ate the lizards in the Royal Indian Hospital died of diarrhea, and those who didn’t die are still suffering with little hope of recovery.” Maybe it was the wrong kind of lizard, he figured. ²

These martyrs were sacrificed to a surprising new cause: the resurrection of ancient Indian medicine. This dissertation examines a dramatic, even fantastic cultural shift in the late 18th century in New Spain (Mexico). In the beginning of the century, the prevailing opinion among professionals and governing classes was that the healing practices of Mesoamerica’s indigenous inhabitants were misguided at best and more likely the product of the influence of Satan himself. But by the end of the 1700s, that is, in the twilight of Spanish rule in New Spain, it was believed that indigenous medicine could redeem the stunted colony, save the empire from penury, rescue academic medicine from irrelevance, and deliver humankind from its most contemptible woes.

The lagartija was just the kind of miracle cure that Spanish elites in Mexico City were hoping to find – one that could resolve an age-old scourge that had defied the best attempts of the learned men of Europe. And it wasn’t the last. “God willing,” announced

¹ This will be explained in great detail in chapter 4.
² “Hospital de San Andrés: experimentos con carne de lagartija” (1782), unpaginated, Vol. 4706, exp. 1, Archivo Histórico de la Cuidad de México.
Antonio de León y Gama, “just as this discovery of the Indians has been propagated, New Spain will revive their [indigenous] herbal medicine!” From mid-century until Independence, New Spain’s intellectual class acted upon the dream of building a society and an economy based on the great wisdom of the Aztec, the Maya, and the “barbarians” of their imaginations. It was a project that built upon wider transformations in health care, and for distinct sectors of society, it all meant distinct things. Was this power and care God’s love for humanity working through nature? The king’s magnanimity working through his empire? The scientist’s dedication to the public good made manifest?

After Independence, this surfeit of meaning was synthesized into a novel idea of medicine and identity: “materia medica mexicana.” The materia medica mexicana, explained a commission to survey the scene in 1832, was an autochthonous creation, a glorious unity of Spanish theory and Indian praxis. Holding this torch, so it was hoped, Mexico would rise to its higher purpose, to “the good of long-suffering humanity, and to the honor of a nation that enjoys a soil so abundant in nature’s bounty, as it is in outstanding geniuses.” What would be more noble and profitable for a young nation but to be the world’s pharmacopeia?

The present study is an analysis of the origins and social transformations concomitant to this emerging notion of a medically sovereign nation founded on ancient wisdom. The first and perhaps most surprising conclusion is that this was by no means

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3 Antonio de León y Gama, Instrucción sobre el remedio de las lagartijas nuevamente descubierto para la curación del cáncer, y otras enfermedades (Mexico: Felipe de Zúñiga y Ontiveros, 1782), 21.

4 Academia Medico-quirurgica de la Puebla de los Angeles, Ensayo para la materia medica Mexicana, arreglado por una comisión nombrada por la Academia Medico-Quirurgica de esta capital, quien ha dispuesto se imprima por considerarlo útil (Puebla: Oficina del hospital de San Pedro, 1832).
the first wave of such enthusiasm. Rather, as we will see, the idea of founding political power and commercial profit on the knowledge of newly dominated peoples was already present in the first century of Spanish rule in New Spain. This ambition faded in the 17th century as the economic system of the empire stabilized around the extraction of silver and as the more utopian expectations of the first colonists turned to cynicism and resignation to rule by force of violence rather than through God’s love. The 18th century project of “rescuing from oblivion” ancient medical wisdom was quite self-consciously an effort of recreating the prior, 16th century optimism.

This story of enthusiasm followed by cynicism followed by redemption is not merely a history of ideas. Rather, as I will illustrate, the central dynamics of the Spanish imperial project were involved and invested in the knowledge and bodies of native vassals: ultimately, this is a story of politics, power, and knowledge. The Inquisition and other extirpators were, of course, dedicated to persecuting curanderas and drawing a stark line between valid medicine and idolatry. But also, healthcare in the colony was marked by an incredible diversity of medical cultures that overlapped and competed for legitimacy and jurisdiction (more below). The medical court (Protomedicato) and the Royal and Pontifical University sought to preserve orthodox practice, as did physicians,

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5 This excludes matters of frontier missionary practice. The missionaries of the regular Catholic orders evince a constant and unvaried understanding that the exigencies of hinterland evangelism required a pragmatic approach to matters of health.

6 It must be noted that this trajectory appears to have been particular to New Spain. Historians of medicine in the Caribbean, for instance, have found different patterns of medical bioprospecting that coincided with the rise of the sugar plantation complex. Also, even so close as Guatemala, Martha Few finds that this ambition towards recovery and redemption of Indian wisdom was less pronounced and lacked the characteristics of proto-nationalism that we see in Mexico.

7 Also known as the University of Mexico.
whose premium rates depended upon their licenses. But they also collided with religious institutions, especially the cofradas (lay brotherhoods) and the Catholic orders, which operated the colony’s system of hospitals and were the frontline of public health. And further, by far the most plentiful medical providers were curanderas, shamans, and other “informal” healers practicing without license and beneath the state’s radar. Finally, with an interest in preserving public order and policia,8 the colonial state at many levels attacked indigenous and popular customs on the grounds that they were unhygienic and uncouth. Altogether, health and medical jurisdiction was always a highly contested terrain that involved all sectors of colonial society.

In the heart of this study, the last three chapters, we witness the class of physicians and their intellectual peers attempting to wrest control of medical pluralism and assume jurisdiction over the health of the colony. I argue in this dissertation that much more was at stake than personal and professional advancement. Most significantly, these Creoles and fellow travelers articulated a new sense of indigeneity, one that would resonate much louder in 19th and 20th century independent Mexico. The salient aspect of this was that Indians9 were now conceived as part of “society.” On the one hand, this made them the target of technocratic reforms aimed at cultivating a more healthful, productive population. On the other, Indians were also conceived as part of the society

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8 The spelling of this word is inconsistent in Spanish documents. In the colonial era, policía with an accent mark referred more to social order and governance; policia without the accent usually indicated polite society and proper behavior, although usage varied.

9 Note on terminology: throughout this text I use the word “Indian” to mirror the language used Spanish colonial caste society. When “Indian” is used it is to reference how Spaniards and other imperial subjects structured their understanding of the world. When referring to actual people of native descent, I use “Amerindian.”
that can act together. It was this second sense that captured the Creole imagination,\textsuperscript{10} and transformed their resentment against Spain into inspirations for a mobilized society. I argue that this, rather than the sense of “Creole patriotism,” gave shape to the earliest inklings of the idea of Mexico. But this was also an idea much more easily articulated than effected, and native communities proved to have much more control over how and when their knowledge would be used.

* * *

This dissertation contributes to the growing literature on the many relationships between colonialism, the natural sciences, and medicine. Since Jorge Cañizares-Esguerra’s landmark article of 1999, the activities and role of scientific practice within the Spanish and Portuguese empires have gained greater scrutiny.\textsuperscript{11} The scholarship that has resulted has been very rich, although the coverage of the field remains thin. Nonetheless, we can now confidently affirm that the Iberian realms were not intellectual backwaters, but sites of important scientific efforts that were employed towards imperial ends.\textsuperscript{12} Nearly as soon as Columbus returned with news of the West Indies, Iberian

\textsuperscript{10} In continental colonial Latin America, Creole indicated persons of Spanish heritage born in the colony, as opposed to \textit{Peninsulares}, who were Spaniards originally born in Europe.


\textsuperscript{12} This has long been a primary prerogative of Spanish and Latin American historians of science. Two comprehensive syntheses are, José María López Piñero, \textit{Medicina e historia natural en la sociedad española de los siglos XVI y XVII} (Valencia: Universitat de València, 2007); Elías Trabulse, \textit{Historia de la ciencia en México} (Mexico: Fondo de Cultura Economica, 2017).
intellectuals set themselves to devising systematic modes of learning about this new land, its flora, fauna, and peoples.\textsuperscript{13} Throughout Spain’s colonial period, imperial subjects devised and revised their methods of making knowledge about the colonies, ranging from the comprehensive cosmologies during the first century to the critical historiography of the middle era and on to modes of visualizing the empire in the 18th century.\textsuperscript{14}

For the past two decades, historians of science have emphasized the role of networks in the production of scientific knowledge in the early modern period. European naturalists were members of an international republic of letters, and their identities, the meaning of their work, the value their of knowledge, the significance of the nature they deciphered all developed within this wide social network. Examining the production of “facts” and “truth,” scholars have found that far from being self-evident, these depended on the affirmation of interconnected individuals, societies, and institutions.\textsuperscript{15}

But these were not the only networks of science. Natural history and medical bioprospecting – more so than their more theoretical kin, natural philosophy and physiology – depended upon extensive, global networks to advance. In the 18\textsuperscript{th} century, these were big sciences, and the single, intrepid naturalist could accomplish little alone.


Rather, he needed large and powerful institutions to move people and things across the world, to mobilize armed escorts in unfriendly territory, to maintain diplomatic relationships with frontier peoples, to maintain the labs, gardens, and forums for their findings. In some early modern empires, institutions like the Dutch East India Company provided such infrastructure; in the Spanish empire, though, where the monarch held monopoly rights to most any branch of commerce, it was all up to the state.

However much the globetrotting naturalist sought firsthand *experience* of nature – to see it unmediated, with one’s own senses – nowhere was nature simply lying in wait. There were people everywhere, and naturalists needed them. Colonial officials and soldiers secured passage, priests and mayors hosted them, settlers forged pathways, and, most importantly, those whose lives and livelihoods were most locally embedded provided knowledge and guided the naturalists towards specimens. Some of these became significant knowledge-brokers. In recent years, historians of science have highlighted the essential role of such brokers interpreting and translating knowledge such that, for instance, the medical virtues of a particular insect were relayed from the frontier to the scholarly centers of Europe. The concomitant negotiations demanded on all sides adroit performances, shrewd deal making, well-aimed pandering, and sometimes a fistful of money.

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18 In addition to chapter 5 below, examples in the scholarship can be found in Neil Safier, *Measuring the New World: Enlightenment Science and South America* (Chicago: University of Chicago Press, 2008); James
domain of brilliant men, and much more the product of the many interactions connecting the European capital with the colonial hinterlands.

In a similar vein, historians of colonial Latin America have found the Spanish imperial enterprise to have relied on many interacting social layers connecting Madrid to, say, Cancun. Dozens of intermediaries were typically involved in any royal prerogative, and a significant amount of the hefty colonial bureaucracy served to mediate between the king’s representatives and the vast majority of the population who were indigenous or casta. For colonists, especially those far from the major cities, advantage came in the opportunity to serve as the middleman, the intermediary; priests, alcaldes mayores, regional governors, tax collectors, intellectuals, and astute merchants assumed the role of gatekeeper, enriching their power and purses. Not infrequently, Amerindian leaders and chiefs enjoyed such strategic advantage as well. As we will examine closely in chapters 3 and 5, science in the Spanish empire was a project of naturalists and physicians trying to take advantage of these pre-existing networks.


In this work, as was typical in the late colonial era, castas refers to all individuals of mixed ethnic background and usually those of African heritage as well – anyone other than pure-blood Europeans or Indians.

All of this attention to networks helps to avoid one of the pitfalls of recent historiography. A matter of considerable uncertainty and debate for scholars of science in the Iberian empires is how to theorize or analyze what goes variously under the names of hybridity, \textsuperscript{21} mestizaje or mélange, \textsuperscript{22} syncretism, \textsuperscript{23} fusion, or criollo-ization \textsuperscript{24} – all of which are attempts to interpret the types of intellectual and cultural mixes and transfers emerging within the cosmopolitan European empires. The central critique of such theories is that they compel us to search for mixes of Amerindian and European, or African and Amazonian, and the like. But these are all reifications. If we take the case of medicine, there was nothing like a unified medical practice in Europe, in the Americas, or in Africa during or before this era. More, shamans, curanderos, Africans specialists, and all sorts of informal healers were always innovating their measures, taking in new influences and learning from experience. \textsuperscript{25} There was, therefore, no “African medicine,” no singular “Indian way of healing.” Adding to this complexity, as we will see in this dissertation, it is in vain that we seek out the original, the unblended ur-medicine, for in


\textsuperscript{22} Serge Gruzinski, \textit{The Mestizo Mind: The Intellectual Dynamics of Colonization and Globalization} (New York: Routledge, 2002).


\textsuperscript{24} María Portuondo, “American Convergence: Science and Technology in Colonial Latin America” (March 28, 2018).

most cases the only sources we have for discerning the medicine of subalterns is through European sources.

This dissertation gingerly sidesteps these problems. Medical hybridity (*medical mestizaje*) has long been a favorite of Mexican historians, but the culmination of my narrative is best thought of as the inverse of hybridization. That is, hybridity is now generally thought to be socially emergent – as the unintended consequence of power, agency, and resistance in unequal encounters; however, the intellectuals at the center of this project imagined themselves as very intentionally, and with a great deal of control, effecting hybridization, the result of which was anything but spontaneous.

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The vogue for “Indian medicine” reveals a broad and radical transformation in the ideological place of *Indios* within the colony, one that prefigured subsequent, national conceptions. Since the conquest, Indians were (in theory) wards of the king and the

26 The ideas of hybridity and mestizaje were originally intended to overcome the blanket generalizations of an earlier generation that assumed a unidirectional movement of culture (that is, from Europe). Now, once again in attempt to overcome the limited palette of our predecessors, historians of late have looked towards the idea of “entanglement” to analyze in more varied and situated hues the interchange of knowledge and its movement around and between globe-spanning empires. This dissertation, while taking inspiration from such scholarship, is not a study of entanglement. Jorge Cañizares-Esguerra, ed., *Entangled Empires: The Anglo-Iberian Atlantic, 1500-1830* (Philadelphia: University of Pennsylvania Press, 2018); Marcy Norton, “Subaltern Technologies and Early Modernity in the Atlantic World” (February 28, 2017).

27 This term was originally coined by Gonzalo Aguirre Beltrán and has since been widely used in Mexican scholarship on medicine. G. Aguirre Beltrán, *Medicina y magia: el proceso de aculturación en la estructura colonial* (México, D.F: Instituto Nacional Indigenista, 1963).

28 The scholarship reflecting this idea is overwhelmingly large, as this reading of hybridity lies behind much of Post-colonial Studies. To begin to explore these works, see Bill Ashcroft, Gareth Griffiths, and Helen Tiffin, *The Post-Colonial Studies Reader* (Taylor & Francis, 2006). For the Spanish Americas and Mexico in particular, see Gruzinski, *The Mestizo Mind*. 
church: they were insufficiently developed humans requiring paternalist protections, guidance, and discipline. This sense of indigeneity persisted through Independence; however, added to it, elites were beginning to conceive of Indians as members of “society.” On the one hand, Indians were now a target for social reforms aimed at optimizing the population.²⁹ But they also were (again, in theory) part of society’s capacity for collective action – its agency or mobilization. In this article, I argue that this was a critical element of the emerging idea of independent Mexico. Creole and Spanish elites in the colony were forging ideas about what New Spain created and gave to a globalized world. As they conceived of a special purpose for this patria – to provide the world with the antidotes to man’s worst bodily woes -- they obligated Indians to provide the unique, autochthonous ingredient. As is elaborated in Chapter 4, it was in this way that Creoles imagined themselves as bound up with Indians in a shared “society” and a collective project.

Through the above argument, I aim to illustrate an alternative to identity as our primary tool for explaining the origin of the idea of national independence. The scholarship on identity is now extensive and historians easily find traces of American identity, or ‘Creole Patriotism,’ all the way back to the conquista.³⁰ In recent decades, however, as historians have become more attuned to the contingencies and

²⁹ In contrast to prior (and concurrent) reforms aimed at spiritual and behavioral improvement.
concatenations of the movements for independence,³¹ identity has likewise fragmented and become more ephemeral. Recent works have also shown that insofar as eighteenth-century Creoles exhibited patriotism for their colonies, this was but one sense of affiliation buried among many, including professional identities, class and caste status, gender, the global republic of letters and science, Spanishness, and region.³² Further, the ‘Perú,’ ‘México,’ ‘Nueva España,’ et cetera of Creole attachment typically looked very little like the bounded population and territory of a nation-state. Meanwhile, scholars of subaltern politics have reached consensus that the vast majority of population did not identify with the nation until the end of the 19th century or even later.³³ In short, the forms of patriotic identity expressed in the century before independence – usually celebrating the virtues of a select group of learned men – appear insufficient to support the nation-thinking that independence entailed. As scholarship has succeeded at dispelling teleological narratives of national becoming, identity has lost its power of explanation. It may be time to look for other modes of exegesis.


Just because Creoles did not see themselves as achieving a nation does not mean independence was a surprise birth. Creole ideas about society did antedate Josef Bonaparte’s usurpation of the throne and exhibited precisely the kind of nation-thinking that would shape the national era. In this sense, this article concurs with those scholars who argue that deeper social and cultural transformations laid important groundwork even if ultimately the wars of independence were not ideologically driven. Yet this need not indicate a teleological development towards modernity, as François-Xavier Guerra suggests. Nor does it require that we credit the Enlightenment for inspiring new political sensibilities and American identity. The Enlightenment, we know, moved in many directions and was full of vicissitudes. What particularly caught the Creole imagination was the idea of a productive population – that the true wealth of the empire lay with its people. This notion was simultaneously informing the Bourbon reforms: both crown and Creole queried how the population – that is, a society – acts and produces as a unified entity. This collectivity cut across the boundaries of caste, the cleavage between bureaucracies (the República de Indios and República de españoles), and fine distinctions of corporate privileges to constitute a unified population.

Attending to collective action instead of collective identity helps us out of one of the conundrums of historiography. One of the persistent problems with identity is that Creoles never expressed any kind of earnest solidarity with indigenous Mesoamericans or

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35 See, for instance, the influential work of Conde Pedro Rodríguez Campomanes. Pedro Rodríguez Campomanes, *Discurso sobre el fomento de la industria popular* (en la Imprenta de D. Antonio de Sancha, 1774).
* castas. Legends of the great Aztec lords could inspire reverence, but this did not extend to living Indios. The scholarship is quite strong that the 18th century was a period of hardening commitment to caste identities and incipient senses of scientific racism. Nonetheless, an influential slice of the elite did see themselves as jointly part of the same society as Indios. But equality was not part of society; this word neither denoted nor connoted “horizontal kinship,” as Benedict Anderson so influentially defined national identity. Society was not so much about identity at all as it was about mobilization. Creole believed that Indians’ esoteric knowledge constituted New Spain’s secret weapon. This was not a weapon against nations, but one against death – a positive implement ‘for the good of humanity’ – and Creole intellectuals were the vehicle. In their minds, they were not equals – they did not identify with Indians – but the project of revealing Mexico’s greatest treasure to the world ideologically linked them in the project that would become Mexico.

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The social realities of this project, however, were never so simple. Amerindians (who were never asked to participate) had their own agendas in the trade of knowledge, and the widely reviled professional physicians had long to go to win a popular following. To begin with the latter, the development of the idea of a materia medica mexicana with a mission to heal the world was a product of a larger transition in the notion of public health and the doctor’s authority. The fetish of Indian medicine was a tool for the class of

doctors (and associated intellectuals) to redraft their imagined social contract. In order to become the acknowledged benefactors of the colony’s health, it was essential that this professional class assume control of the myriad modes of medical fusion and exchange happening about them. More, acting as the necessary brokers between European savants and the natural history of North America was to them a way to garner respect and authority in European circles.

Physicians had before them an uphill battle to earn the power and prestige that came with being the doyens of public health, and that was because that honor was already taken. It has usually been assumed that the idea of public health – defined generally as the use of state infrastructure to address matters of population health, and the use of healthcare to further state interests – was absent from the Spanish realms until the onset of the main Bourbon reforms beginning in the 1760s. However, as I show here, jurisdiction over the bodies of the infirm and over the role of health in statecraft was long a contested terrain. Since the earliest days of the conquest, administering the health of both colonizer and colonized was a critical element of colonial expansion, so much so that it gave birth to new institutions that claimed authority over the bodies of Indians and were mandated to charge into the frontiers and seed the land with hospitals. By the time of the Bourbon reforms, religious brotherhoods operated an extensive infrastructure of health institutions. These bitterly fought each other for terrain and jurisdiction over the infirm, but it was broadly acknowledged that they were the proper keepers of institutionalized healthcare.

To win the torch of public health, the physician class (and their allies) had to overcome the respect for pious charity. The key to charity in the Spanish colonies was “zeal,” an omnipresent concern of the crown and missionaries alike. In the empire, zeal was the category by which ideology was transferred to individual emotional compulsion. Zeal was how one felt faith and it was how one enacted faith. Zeal was God’s love, descending from Heaven to the king and/or (depending on the political climate) the pope, to the viceroys and the church officers, to the clergy, to the acolytes, and finally, to the utmost objects of God’s mercy, the poor and those who were always referred to as “the miserable Indians.” By-in-large, colonial era hospitals were the manifestation of this zeal – of God’s love channeled through his flock. In this way, state imperial policy was an affective experience: imperial subjects felt in their breasts the confluence of spiritual fulfillment and imperial exigencies.

Zeal was also charismatic, and this is what ultimately mattered for the rising Creole intellectual class in the late 18th century. As secular, professional physicians attempted to assume jurisdiction over the health of the colony, they had to contend with the religious brotherhoods which had, for more than a century, dispensed the king’s zeal and charity. As I show in chapter 3, using the Royal Indian Hospital as a case study, the religious orders had the decidedly upper hand in the courts of public and government opinion. They were widely acknowledged as the proper vehicles for apportioning charitable care, and, driven by zeal, their motives were far less suspect than those of the money-loving physicians. The challenge for these doctors was overcoming intense unpopularity, for which they appropriated the discourse on zeal to articulate a new mission of public service and the good of “society.”
Creoles doctors, though, were not alone in coopting zeal. One of the paradoxes of the *materia medica mexicana* is that it was as much a product of imperial initiatives as it was of local intellectuals. Much of the research that created this pharmacopeia was conducted under the auspices of the Royal Botanical Expedition to New Spain led by Spanish physician Martín Sessé. Sessé and his principal assistants, José Mariano Moziño and Vicente Cervantes (chapter 5), all cast their hopes and dreams on the botanical richness of the New World and became close collaborators with Creole naturalists and physicians. Nonetheless, their mandate and money came from the crown, which was bowing to demands for *comercio libre* and seeking new modes of asserting authority within a more (classically) liberal Atlantic world. Rendering the empire “visible and useful,” in Daniela Bleichmar’s phrase, was part of a wide ranging program to advance centralized control. Some scholars have characterized this as a transition from semi-independent *kingdoms* (viceroyalties, formally) to administered *colonies*. Centralized knowledge of the natural resources of the territory was one element of this new strategy of administration. The explicitly nationalist *materia medica mexicana* was the unexpected product of this centralization.

In the field, realities were different. In these chapters, we will see leading colonists and their acolytes plumbing the past and venturing into the frontiers in search of the knowledge of the “wild Indians.” Amerindian communities and healers, though, bargained hard and demanded a high price for their secrets. With loyal communities of

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38 Such as Antonio Alzate y Ramírez, José Ignacio Bartolache, and Antonio de León y Gama.
39 Bleichmar, *Visible Empire*.
patients, extensive supply networks, and advantageous market monopolies, native healers beyond the colonial capital saw much to lose and little to gain by engaging scientific voyeurs. The colonists’ incapacity to read local dynamics and ineffectiveness in negotiating with Amerindian healers and communities as often as not resulted in closed doors and lost knowledge. Still, the professionals rode their project high, gaining esteemed positions in Spain and the newly independent Mexico based on their claim to cultural appropriation. But as they claimed success, they were often also stymied or served as stooges for subaltern groups that controlled access to such knowledge. While they sought enlightenment and cultural recovery, the loss of knowledge of medicine and New Spain’s environments was just as much, if not more, part of the process.

**Medical Practice in Seventeenth and Eighteenth Century New Spain**

Across the 17th century, and indeed the 18th as well, healing and healers were special concerns of the Holy Office of the Inquisition, and, when jurisdictional matters allowed, the court relished prosecuting *curanderas* and *curanderos*. Meanwhile, since the 1590s, the Royal Tribunal of the Protomedicato was charged with defending medical orthodoxy by controlling the licensing of the official classes of healers: physicians, surgeons, and pharmacists. Yet, despite official and ideological positions against all kinds of non-academic medicine, alternative practices were everywhere, and these mixed,

41 Amerindians were formally governed as the “Republic of Indians” and were therefore outside of the Inquisition’s jurisdiction. They only came under its piercing gaze when a Spaniard or casta came under suspicion. “Negros” and black healers were, however, subject to the Inquisition as were any medical providers who were not indigenous.

changed, and adapted as ideas, materials, and people moved throughout the colony. Indeed, a quick survey of the scene of medical attention within the viceroyalty demonstrates amply that the object of this dissertation is not the advent of medical hybridity, but rather, the advent of the idea of inter-ethnic medical hybridity.

It is well-established in the historical scholarship that the Inquisition and the Protomedicato did little or nothing to stem the medical authority and attraction of healers practicing in the informal sector. Indeed, by far the most prevalent and available medical attention in the colonial capital was accessed through this informal market. Curanderas of a native stripe were present, certainly, but also practicing medicine were Africans and their descendants, mestizos and other castas, Spanish folk or popular medicine, and a wide array of Europeans without formal training and/or license practicing below the Protomedicato’s very myopic radar. This was not at all difficult. The Protomedicato was a stunted organization which, even in the early 19th century still had no effective reach beyond some parts of Mexico City, Puebla, and Guadalajara. More, even the most fervid government officials were forced to recognize that the meager number of professional physicians, surgeons, and pharmacists in the colony were in no way sufficient to meet even the needs of the Spanish population. Therefore, like many sectors of Spanish colonialism, officials turned a blind eye to all but the most flagrant violations.


44 This is addressed in chapter 3.

45 Lanning, *The Royal Protomedicato*. 
And that was in the capital! Beyond Mexico City licensed, orthodox practitioners were, literally, few and far between. A resident physician in most towns was more than could be expected, and so distant from the Protomedicato, his practice was unlikely to stick to book. This was for several reasons. First, the official pharmacopeia mostly sanctioned only medicines long known to Europe.\textsuperscript{46} Although some, such as oregano or chamomile, could either be grown or collected regionally in ersatz varieties, many of the most prized had to be imported. These almost never arrived in port with sufficient regularity or in sufficient quantity to meet the needs of Mexico City, let alone beyond.\textsuperscript{47} Second, especially outside of Mexico City, the local physician of European extraction was likely not to be what he seemed. It was not an uncommon ruse for immigrants (especially those from non-Spanish European kingdoms) with a little experience in healing to, upon arrival in New Spain, suddenly announce that they actually were university-trained doctors, but – alas fate! – their diploma was washed overboard somewhere near Barbados.\textsuperscript{48} Third, everywhere in the colony even the best credentialed physician was competing in a local medical market that pitted him against many classes

\textsuperscript{46} A few New World medicines, such as tobacco, cocoa, \textit{guayacán} (also called \textit{palo santo}), \textit{bálsamo}, and quinine were incorporated into sanctioned medicine, although most of these, excepting quinine, were first encountered in the Caribbean and were adopted by Europeans \textit{before} the encounter and conquest of the continental Americas. José Pardo Tomás and María Luz López Terrada also note that many of these early enthusiasms were adopted when Spaniards mistook them for European ones, or identified them as related ersatz simples. José Pardo Tomás and María Luz López Terrada, \textit{Las primeras noticias sobre plantas americanas en las relaciones de viajes y crónicas de Indias, 1493-1553}, Cuadernos valencianos de historia de la medicina y de la ciencia ; Serie A, Monografías 40 (Valencia: Instituto de Estudios Documentales e Históricos sobre la Ciencia, Universitat de València, C.S.I.C, 1993), 205–7.

\textsuperscript{47} This was a persistent problem that enthusiasts for indigenous medicine sought to solve.

\textsuperscript{48} Lanning, \textit{The Royal Protomedicato}, find page number.
of informal healers whose fees were a fraction of his. Although the physician’s greatest 
asset was his legitimacy, meeting the desires and expectations of local clients also could 
draw him towards more popular remedies.

The above was even more true of the principal institution of medical care on the 
Spanish periphery: the mission hospital. As will be addressed in various ways in chapters 
two, three, and five below, hospitals under the jurisdictions of the religious brotherhoods 
were by far the most common institution of public health in the viceroyalty. Not only did 
the major orders (Franciscans, Jesuits, etc.) develop their own medical centers, but New 
Spain also gave birth to three new brotherhoods dedicated solely to fanning across the 
colony building hospitals. These were mostly not under the jurisdiction of the 
Protomedicato and, although some brothers were trained physicians, the majority of 
medical attention administered was by informally trained friars and acolytes. Evidence 
from frontier and rural hospitals, but also those within Mexico City, shows that these 
hospitals faced the same issues in regards to receiving desired medicines as did everyone 
else, and in the effort to appeal to indigenous residents (for the body was a pathway to the 
soul), mission hospitals permitted and incorporated native practices that were not 
anathema to their faith.

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49 See the extended footnote 13 in chapter 3 for an illustration of how these sectors competed in Mexico 
City.

50 These were the Order of San Juan de Dios, the Order of San Hipólito Martyr, and the Order of the 
Bethlehemites.

51 At times, if such hospitals within Mexico City also ran a public apothecary, this could garner attention by 
the Protomedicato.

52 See chapter 5.
This all comes to two conclusions about the state of medical practice in the colony that shape this study. First, New Spain was a region of incredible medical pluralism in which orthodox medicine was a minority player. Indeed, it is more useful to think of the viceroyalty as being composed of multiple ever-shifting medical cultures.\footnote{I take this term from John Slater, José Pardo Tomás, and Marialuz López-Terrada, Medical Cultures of the Early Modern Spanish Empire (Farnham, England: Ashgate Publishing, 2014). Also see José Pardo Tomás, “Introducción,” in Geografías médicas: Orillas y fronteras culturales de la medicina hispanoamericana (siglos XVI y XVII), ed. José Pardo Tomás and Mauricio Sánchez Menchero (Mexico: UNAM, 2014), 9–16.} Most everywhere, these were differentiated by social sector and caste. But also, different localities developed distinct cultures depending on local contingencies: the availability of certain remedies; the power of the healing traditions existing there at contact;\footnote{Some places, such as Cuernavaca and Huaxtepec were renowned centers of healing before Cortés’s arrival; this reputation endured through the conquest attracting the infirm for centuries to come.} region-specific medical concerns;\footnote{Northern mining areas, for instance, were known to attract native curanderos as medical practitioners were otherwise almost entirely absent and mining and mining settlements were particularly injurious.} miscellaneous variations in migration patterns from Europe; the presence or absence of Africans, Filipinos, or American Indians; and patterns of mission expansion. Even the personalities of local governors and bishops could affect how medicine developed locally.

Second, within this environment, exchanges, transfers, borrowings, and appropriations were more common than the preservation of any particular medical tradition. Prosecutions by the Inquisition have long been used by historians to note the prevalence of “medical mestizaje” in New Spain. However, all indication is that the few hundred cases that were swept up by the official extirpators were but the tip of an
iceberg. The accounts of missionaries, hospitals, militias, hermits and hagiographers, and conquistadors all evidence that exchange of myriad forms was rife. Only the unlucky or incautious came before the Inquisitors.

Connecting Spaces

Inventing “Indian medicine” and assuming control of medical fusion and exchange were fundamentally matters of reimagining the relationship of land and space, towards envisioning New Spain as a self-contained and self-realized entity. It is worth taking a moment here to consider what this meant. This new relationship to space was integral to the newly envisioned idea of Indian subjecthood and was fundamental to the project of medical appropriation generally.

Concerning geography, or more specifically, topography, other scholars have long highlighted cultural and intellectual aspects of the developing esteem for and

56 Juan Nentvig, Rudo Ensayo: A Description of Sonora and Arizona in 1764 (University of Arizona Press, 1980).
57 Hospital Real de Naturales, “Libro de botica en que se asientan las medicinas que se traen para este Hospital Real de los Naturales.” (Fotos, 1721), Colección Antigua 0643, BNAH.
58 Bernardo de Vargas Machuca, Milicia y descripción de las Indias (Madrid: P. Madrigal, 1599).
59 Francisco de Losa, La vida que hizo el siervo de Dios Gregorio Lopez, en algunos lugares de la Nueva España (Mexico: Juan Ruiz, 1618).
60 Bernal Díaz del Castillo, Historia verdadera de la conquista de la Nueva España: Manuscrito “Guatemala” (Mexico: UNAM, 2005).
61 The conditions for curanderos and curanderas was likely similar to that of alumbrados, or mystics. Nora Jaffary writes that not only was mysticism usually only borderline heresy, making prosecution difficult, but moreover, mystics often had powerful patrons who protected them. False Mystics: Deviant Orthodoxy in Colonial Mexico (University of Nebraska Press, 2004), introduction, 56-57. Additionally, Noemi Quezada explains that curanderismo was a learned art: it involved extensive training and practice. Generally speaking, curanderos and curanderas did not attain their status through supernatural inspiration; this phenomenon was restricted to Spanish and possibly African traditions. This likely limited the extent to which curanderas would be charged with heresy. Quezada, Enfermedad y maleficio: el curandero en el México colonial, 29–30.
defensiveness of the nature of the *patria*. In the 18th century, the European Republic of Letters rekindled early colonial anxieties about the salubriousness of the New World. Since the conquest, Europeans feared that the warm moisture of the middle Americas world erode their manhood into the same sad, “phlegmatic” state of the Indians. Again in the Enlightenment, French savants (above all) insisted that the New World was insufficiently virile – that its nature was weak-kneed and atrophied compared to that of Europe and could only sustain an equally emasculated society. Just look at that embarrassment of the animal kingdom, the sloth, which any mightier land would have ripped up into extinction!62 American nationalists across the hemisphere in various ways defended the land of their birth from these barbs, pointing to the Amazon’s’s fecundity, the power of the bison herds, the height of the moose, the grandeur of the Andes, and so on.63 Beyond this fancy dispute, however, was another equally consequential and more practical reorientation towards the land of New Spain. As the century advanced, Spanish eyes and attention drifted from the insular boroughs of Spanish society in Mexico, Puebla, and Guadalajara towards the frontiers of the viceroyalty. This importantly colored developing ideas of indigeneity, the medical market, and public health.

Cartography usefully illustrates the transformation of California, New Mexico, and Texas from frontier wastelands into repositories of cultural and natural assets. Below we will consider three maps of New Spain created in 1691, 1746, and 1768 that evince


the new spatial imaginary. The first is a manuscript map from the pen of the illustrious 17th century Creole intellectual and professor of mathematics at the Royal University, Carlos de Sigüenza y Góngora (figure 1). As one of the heroes of Mexican nationalism, Sigüenza’s map is now heralded by the Mexican National Archive as the first of Mexico penned by “a Mexican.” Despite the erroneous date of 1641 on the map itself (four years before Sigüenza’s birth!) there is little scholarly doubt of Sigüenza’s draftsmanship, most likely of prior draft from which this edition was made. This original is lost, however, Sigüenza’s map was copied and reprinted several times in Europe and was hailed as the most detailed and accurate of its day.

Thinking of Sigüenza’s map as a whole, the land of New Spain is remarkably dense, a density that is heavy with meaning. Even on the northern and southern extremes where settlements and exploration was thin the space on the paper is crowded and full. Sigüenza explained this in the legend: “because of how inaccessible many sites are due to the roughness of the land and its routes, included here are the longitudes of some [locales], because [they are] not as they would appear from the air or on the page.” With these words the mapmaker admitted that the contours of the page haven’t the one-to-one correspondence to reality that one would desire and that that the map was not based on

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65 Mapoteca Manuel Orozco y Berra, Archivo General de la Nación: http://mmoyb.blogspot.com/2013/02/el-primer-mapa-general-de-mexico.html

66 This particular draft, the earliest known copy, was created to accompany the “Crónica de Michoacán” by Fray Pablo de la Purísima Concepción Beaumont.

experiential knowledge because the crowded land was so unapproachable. Therefore, instead the abstraction of longitude must suffice in place of concrete experience. This map, then, served merely as an aid to the imagination to help the reader picture the land in his mind; it was useless for sea or overland travel. The inaccessibility of New Spain is confirmed visually: on close inspection the density of the map derives from the natural features of the landscape. These are not, however, displayed with any accuracy or even varied distribution. Rather, Sigüenza merely drew in small mountains in every empty space between towns and rivers: scarcely another mission or hacienda could be established without first moving a mountain. And therefore, unlike the innumerable iconic maps of the Western Hemisphere in which the vast, blank *terra incognita* traces the perimeter, Sigüenza’s map does not at all bristle with unrealized potential. The map is satisfyingly complete and full: no room for *El Dorado* here, the conquistador’s age is over.
Figure 1: Sigüenza's map
Contrast this impression of density with an official map from the early 18th century. In 1741 the cartographer Joseph Antonio de Villaseñor y Sánchez was commissioned by King Philip V to create a comprehensive survey and map of New Spain to correct “the great inconveniences and prejudices that result from the lack of particular information about the true state of these Provinces in the Council of the Indies.” This being the height of the War of Jenkin’s Ear, which revealed so many vulnerabilities in the American territories, Philip V was eager for more accurate cartographic and economic information. Villaseñor, though, had higher ambitions. He immodestly presented to the Council what he called a “Novi Mundi Idea” (New World Idea), which he titled the
Teatro Americano (American Theater). “Because man is a grand theater...,” he wrote, “fittingly [this work] is called a theater, a report that represents the many and distinct Nations that populate this land.”

This inkling of a multicultural empire was illustrated in a lengthy and greatly unsatisfying ethnological survey of the realm. Villaseñor, though, was neither a gifted writer nor much of a traveler. Therefore the compendium consisted of standard survey data: town coordinates, rough population estimates, languages and caste composition, notable eccentricities, and the most significant natural resources and manufactures. Ingratiating himself to the king, Villaseñor rendered a visual allegory of his patron’s Enlightenment aspirations (figure 3). The Jesuit Inquisitor Juan Francisco López explained that the image “captures the

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68 José Antonio de Villaseñor y Sánchez, Teatro Americano: descripción general de los reynos, y provincias de la Nueva-España, y sus jurisdicciones (Mexico: La viuda de D. J. Bernardo de Hogal, 1746), unpaginated frontmatter.
Work and the intent of the Sovereign’s orders perfectly; because on top of a Globe, which represents this New World, is engraved the Image of our Catholic Monarch, an engine of superior intelligence that assists the good Government and direction of so stifled an empire.”

Villaseñor’s map of New Spain (figure 4), ranges a good deal further to the north than Sigüenza’s and in the inset in the upper left (“fig° 2”) it extends beyond the page and up the Rio Bravo (Rio Grande) beyond Albuquerque to Taos (Los Taos). Of course, being made for the Council of the Indies, forts and garrisons play a comparatively larger role here. More noteworthy though is that inland the map is dominated by river systems, and at sea by portolan lines. Neither of these are terribly accurate, and portolan lines were by this time an outdated technology and, as presented, only served as decoration. The map therefore had no practical use for navigation by land or by sea. Rather, what it functioned for was to aid administrators in imagining movement across earth and water. The riverine path of transit from each town and garrison can clearly be traced, and the decorative portolan lines, emanating from Mexico’s most significant port, Vera Cruz, invite the map reader to imagine the voyage thence to Spain. With this map, goods, people, bibles, guns, and animals may the travel the imagination from the remotest garrison to Havana, Cádiz, Seville, and Valladolid. Finally, we also see the tentacles of rivers reaching into the unknown spaces of terra incognita. This is a colony of movement, and one whose limits are far from realized.

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69 Ibid.
Figure 4: Villaseñor’s map
Finally, consider Antonio de Alzate’s map of 1768 (figure 5). Alzate (who we will see again in chapter 4), as opposed to Villaseñor, is another intellectual hero of Mexican nationalism, although this map was created for the Armada. The extensions of the map are different. The Yucatán peninsula is missing (it never was profitable anyway) and Louisiana is but a suggestion (despite falling into Spanish hands in 1762). Sigüenza’s mountains are mostly absent, except on the northern frontier. Different printings of this map,70 however, demonstrate that the Rockies were inserted by hand stamps after the printing process and on the various exemplars they are differently situated – hence, they meant nothing specific. Here we loom on the horizon of a new phase of imperial expansion. The notes on the map make it clear that the only geographic news of Alta California still came from sources 170 years old, yet the inclusion of these scanty known lands indicate that their time has come. And sure enough, the same year the map was printed Gaspar de Portolá and Junípero Serra began their expedition to San Diego and Monterey, and the following year they founded the mission in San Francisco. Until then, Alta California was a slate for the imagination. This mythical potential is underscored by the inclusion of the “Laguna de Teguyo” at 260° long. and 42° lat. with the note, “From the region of this lagoon it is said that the Mexican Indians left to found their Empire.” It is still a legendary land, and although the mythical city of Cíbola may not exist, the map still shines with unrealized potential.

When we consider this map as a whole, we can see a combination of elements from Sigüenza’s and Villaseñor’s maps. As noted above, expansion is evident, in California, in New Mexico, and in Texas as well. However, we can see that there is nothing here to imply connection to the imperial metropole. The portolan lines are gone, and the common icons of seafaring – ships, waves, sea monsters, and the like – are completely absent. This is a continent that exists in and of itself. It does not require European savants to come and realize it. We also see notably the mapping of jurisdictions. As the key indicates, this is formally a map of bishoprics, and Mexico, Oaxaca, Puebla, Valladolid (Michoacán), Guadalajara, and Durango are clearly marked. This creates a sharp distinction between settled lands and frontier lands. Whereas Villasenor’s and other earlier colonial maps center on Mexico City as the key node in a network connecting the frontier garrison to the imperial brain and customs house in Seville, here Mexico City is lost in an expanse of settled territory. These bishoprics, outlined in green and yellow, are not spaces of transit as they were in Villaseñor’s map – they do not merely connect the metropole to colonial assets. The map represents, then, the imaginary of two geographic entities, one closed and one open, one a self-possessed society and the other a work in progress.

Alzate’s map illustrates a transformation of geographic sensibility that would have long resonance in the 19th and 20th centuries. The frontier lands here – land of unknown potential – need not network back to Spain. Rather, there is a perfectly capable society already present, ready to take the hinterlands into their own charge. As we will see in the following chapters, this sensibility would have social and political consequences for colonial society. In particular, in chapters 4 and 5, we will witness the
creole intellectual class develop a sense of professional urgency and duty to take charge of the care and health of the colony with ever-new activist zeal. This was accompanied with novel participation first in the local market for “Indian medicines” and later the active bioprospecting for new cures in the abundant lands indicated in Alzate’s map.

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Figure 5: Antonio de Alzate’s map
Chapter Outline

The first chapter recounts the culture and climate of the early colonial enthusiasm for the indigenous medicines of Mesoamerica. In the 1700s, Spanish and Creole intellectuals were self-consciously attempting to recover and redeem Spanish science of the 16th century, with their sights especially set on the Royal Physician, Francisco Hernández. In this chapter, I place Hernández within the larger frame of medical exchange and orthodoxy within the early colony. Here, I focus on how a developing distinction between nature and culture – or more specifically, between knowledge of culture and knowledge of nature – set the conditions for the self-conscious appropriation of elements of indigenous knowledge without (in theory) also swallowing idolatry with it. Particularly, Spaniards developed a distinction that today we would call a difference between conscious and unconscious knowledge but which they represented as between tacit knowledge and philosophical/theoretical knowledge. The Indians, they concluded, had tacit knowledge of nature and philosophical knowledge of idolatry. Following this distinction, the Indians had no conscious or philosophical understanding of nature: they did not understand it, but could only use it. And because they did not understand it, it was certain their idolatry did not infect it. Their knowledge of nature, thus, could be integrated into European natural history and medicine.

The second chapter attempts to demonstrate the structure of the imperial medical field as related to public health from the 16th century to the 18th. With a mind towards the spatial dynamics of imperial expansion and the missionary prerogatives of the mendicant orders, I first track the proliferation of hospitals in New Spain and its hinterlands (which stretched from Guatemala northward to San Francisco, and east
towards New Orleans), to emphasize the very critical role of medicine to the project of empire building. Put simply, hospitals did not merely service Spanish conquerors and missionaries as they pushed the frontier further; instead, hospitals were more often built to serve as a controlled space of encounter, where Indians would be enticed with the promise of health, but then would be enclosed within a fortress of faith. This chapter goes on to argue that the medical practitioners who governed this empire of health – who were members of religious brotherhoods – acted to manifest their Christian zeal. Zeal in the Spanish empire connoted far more than mere enthusiasm; it made reference to holiness and faith, to God’s love and the empire’s goodness. Public health before the modernizing reforms of the Bourbon era meant to feel and connect with the zeal descending from on High, and to realize it through the integrated projects of charity towards the body and discipline towards the soul.

This background helps explain and shed new light on the processes by which the Bourbon reforms sought to reorder the relationship between imperialism and public health. Chapter 3 follows the transformation of the Royal Indian Hospital in Mexico City in the 18th century. The Royal Indian Hospital was founded in the mid-sixteenth century as a model of the crown’s mercy for the woes of his subjects. By the early 1700s, however, it became a site of heated competition between the religious orders (in this case, the Order of Saint Hippolyte) and secular physicians vying for jurisdiction over the health of Indian bodies. The Hippolytes had the upper-hand in the struggle in many regards: ideologically, they carried the king’s torch of zeal; more, the medical profession was deeply maligned, thought by most to be a bunch of hacks and two-bit charlatans. Aiding in the profession’s ascendancy in the second half of the century was the growing market
for patent drugs and especially those touted as indigenous. Physicians did what they could to take advantage of this stream and use it to position themselves as the vehicles of the crown’s zeal: “My only motivation is to satisfy the charitable heart of Your Excellency and the Christian zeal of this New Spain, not only for the protection of the sustenance of its Republic and the preservation of its peoples, rather to improve the health of the Human species.”71 Explicitly, the hospital’s records make little mention of the will and actions of the native clientele through this transformation. However, reading sources “against the grain” we can see that native subjects exploited tensions and openings to win forms of independence within the hospital, to take unwanted attendants to court, and even to win more space within the hospital for their own medical traditions.72

In chapters 4 and 5 we enter into the apogee of the fetish for Indian medicine. Beginning roughly around 1780, Creole intellectuals sought to actively commandeer informal herb and medicine markets and position themselves as the legitimate gateways to indigenous medical wisdom. “I, in contrast [to self-interested marketers],” wrote Hipólito Ruiz, “maintain no mysterious secrets or charades, and motivated solely for the good of humanity I immediately announce my discovery to all [the public].”73 This all hinged on a new ideological stance towards indigeneity. Both regretting the sad state of

71 “Hospital de San Andrés: experimentos con carne de lagartija,” unpaginated.
73 Ruiz was the director of the botanical expedition to Peru, but his sentiment echoes perfectly that of the naturalists in New Spain as well. Hipólito Ruiz, Disertacion sobre la raic de la Ratanhia, de la calaguala y de la china y acerca de la yerba llamada canchalagua (Madrid: Imprenta Real, 1796), unpaginated frontmatter.
the so-called “tamed” Indians and fearing their power of insurrection,\textsuperscript{74} enlightenment Spaniards began developing a keen appreciation for the mythic Aztec and newly romanticized those Indians living beyond the frontier, free from the weighty fetters of civilization. The search for Indian medicine thereby took on a two-pronged method: to recover the ancient wisdom of the great empire of Moctezuma, and to tap the unadulterated knowledge of nature of the “bárbaros,” the still “wild Indians” of the frontiers.

In chapter 4 I look at the theory of recuperating lost native lore and wisdom. Many historians have noted the nostalgic turn of Spanish thought during the enlightenment.\textsuperscript{75} In the late 18th century Spanish intellectuals forged the legend of the Spanish Golden Age and yearned to set back the clock of empire and re-do the seventeenth century.\textsuperscript{76} In New Spain, nostalgia was not only a way of looking at history, but a method for studying nature. Using the controversy in 1782-1783 about the medical uses of lizards in Mexico City, this chapter analyzes the theories of knowledge, history, and language that informed the projects of recovering lost Aztec medical knowledge. Working with the long-standing linguistic precedents set by nearly 300 years of missionary colonization, Creole intellectuals in New Spain sought reconstruct the languages of the past to recover the knowledge of nature that they contained. The

\textsuperscript{74} This fear was fueled by the demographic rebound of Amerindian populations in the 18th century and became especially poignant after the devastating uprisings in highlands Peru of Túpac Amaru II and Túpac Katari in 1780 and 1781.


\textsuperscript{76} Jorge Cañizares-Esguerra has argued that this backwards-looking spawned the new historical epistemology -- empirical historicism -- that would be a hallmark of the European Enlightenment. Cañizares-Esguerra, How to Write the History of the New World.
missionary tradition taught the Creoles that language was dangerous, powerful, and could contain within it secrets and truths that may or may not be consciously known by the speaker’s free will. The new Creoles sought to reverse the war against native tongues and instead reconstruct them – to conduct an archeology of language to recover the past as it really was.

Finally, in chapter 5 we look at the other half of the methodology: the recovery of knowledge of nature from living Amerindians or their substitutes. The focus in this chapter is on the fieldwork of the Royal Botanical Expedition under the direction of Martín de Sessé from 1787 to 1803. The expedition, like its counterparts in Peru and New Granada, was under orders to catalogue and name the flora of the king’s vast realms, particularly in the underexplored peripheries. Travelling village to village, mission to presidio, the expedition members were especially mandated to document the valuable products of the land, medicinal ones foremost. On the one hand, the crown desired another market blockbuster like quinine to enrich the coffers, but what received far more emphasis was bringing honor to the memory of Spanish colonialism. In particular, Charles III ordered the naturalists to recover and validate the medical plants recorded by the sixteenth-century Royal Physician Francisco Hernández. This all put Sessé’s team in the position of begging the participation of native communities to help identify plants and to explain their medical uses and misuses, their growth habits, the possibilities for cultivation, and the capacities of local networks of gathering and marketing them. Using three instances – from Toluca, Michoacán, and Sonora – this chapter analyzes how the naturalists depended upon subaltern groups and how and when the latter chose to engage.
Chapter 1: Healthy Bodies, Sick Minds

...the earthly Paradise... lies at the summit of what I have described as the stalk of a pear... by gradually approaching it one begins, while still at a great distance, to climb towards it. As I have said, I do not believe that anyone can ascend to the top. I do believe, however, that, distant though it is, these waters may flow from there to this place which I have reached.

Christopher Columbus, Narrative of the Third Voyage

On August 3rd of 1492, Columbus set sail. He sailed, he later explained, towards higher and higher elevations up the side of a pear-shaped earth, approaching the stem, where, although men could never reach it without the aid of God, he believed stood the Garden of Eden, bursting with fecundity. Here, on the pear’s nose, just beyond view of the earthly paradise, Columbus sighted the Indies. Wonderful nature was all about: “Everything on all these coasts is so green and lovely that I do not know where to go first, and my eyes never weary of looking on this fine vegetation.” At each successive island, Columbus’s hyperboles multiplied as he groped for an adequate vocabulary for the marvels before him, “the most delightful thing in the world.” Although ecstatically pleasurable, the mission was still conquest, and Columbus struck a confident tone from the deck of the Santa María: “I think that many trees and plants grow there which will be


78 For a deeper reading into the role of wonder in Columbus’s letters, see, Stephen Greenblatt, *Marvelous Possessions: The Wonder of the New World* (University of Chicago Press, 1992), Ch. 3.
highly valued in Spain for dyes and medicinal spices. But I am sorry to say that I do not recognize them.” Yet this inspired no humility or deference to the knowledge of the Caribs or the Taínos. Rather, with characteristic arrogance, Columbus inaugurated one of the foundational myths of the age of exploration. Seeing local islanders gesturing and calling in a foreign tongue, Columbus judged they must be “asking if we came from the sky.” Convinced of their simple-mindedness, docility, and inferiority in battle, once ashore and with no heed to translation, Columbus stuck the royal standard in the sand and declared in the Castilian tongue that the land belonged to the crowns of Castile and Aragon. While the islanders explained that their home was called Guanahani, Columbus corrected them, clarify that he had rechristened the islands San Salvador, Santa María de la Concepción, Fernandina, Isabela, Juana, “and to each a new name.” Columbus, in sum, was a bad listener.

While Columbus’s wonder at nature and his arrogant disregard for local knowledge are tempting symbols for the relationship of Spaniards to nature in early empire, such a policy in the permanent sense would have led to early demise. While marvel indeed was a common reaction to the products of nature in the New World, especially amongst natural philosophers and collectors of curios in Europe, the challenge of nature in the process of conquest did not countenance quiet contemplation or

79 Columbus, The Four Voyages of Christopher Columbus, 68–69.
81 Columbus, “Carta a Luis Santángel,” 220.
82 For an example of such overreading, see Greenblatt, Marvelous Possessions, chapter 3.
indulgence in wonder. Nor did it permit the willful disregard of the potentially valuable knowledge of nature held by the Amerindians. “The men who defeated the Mexica seized power in a land about which they knew nothing,” Serge Gruzinski reminds us.83 And, as the great chronicler Gonzalez Fernández de Oviedo y Valdés explained in 1535, it was more nature than the mind could comprehend, equal to the bounty of God himself: “marvelous and innumerable works [though which] our very God, Lord of all, teaches us.”84 The following century saw various efforts to incorporate native knowledge about this land and its flora and fauna into the Spanish understanding of the natural world.

In this chapter, we will look at some of the most prominent of these projects in order to understand the process by which the Indian of the Spanish imagination transformed from knowledge-bearing subject to a knowledge-void object of imperial policy. As many scholars have noted, Spaniards found that indigenous knowledge (especially of medicine) was not simply ready for the taking.85 It was instead wholly imbricated into native cosmologies and religion, and appropriating this knowledge

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83 Gruzinski, The Mestizo Mind, 50.

84 He continued: “¿Quál ingenio mortal sabrá comprender tanta diversidad de lenguas, de hábito, de costumbre en los hombres destas Indias? Tánta variedad de animales, assí domésticos como salvajes y fieros? Tánta multitud innarrable de árboles, copiosos de diversos géneros de fructas, y otros estériles, assí de aquellos que los indios cultivan, como delos que la natura de su propio oficio produce, sin ayuda de manos mortales? Quántas plantas y hiervas útiles y provechosas al hombre? Quántas otras innumerables que a él no son conosçidas, y con tántas diferencias de rosas é flores é olorosa fragancia? Tánta diversidad de aves de rapiña y de otras raleas? ¿Tántas montañas altísimas y fértiles, é otras tan diferenciadas é bravas? Quántas vegas y campiñas, dispuestas para la agricultura, y con muy apropriadís riberas? Quántos montes mas admirables y espantosos que Ethna ó Mongibel, y Vulcano, y Estrongol (y los unos y los otros de baxo de vuestra monarcía)?” González Fernández de Oviedo y Valdés, Historia general y natural de las Indias, islas y tierra-firme del mar océano (1535) (Madrid: Real Academia de la Historia, 1851), vol 1. p. 2.

required stripping the words of native healers, shamans, or laypeople down to what, in European eyes, seemed the legitimate core of natural knowledge. This project ranged across the whole of the 16th century, and was integral to the extension of imperial control over central areas of the empire and the developing consensus on the place of Indians in colonial society.

But by the mid-17th century, this project was aborted. I hope to demonstrate below the contours of this erasure, this ideological disempowerment of Amerindians. From early on, *experience* emerged as the common denominator between Spanish and Indian knowledge: it was thought to be a type of mental sensation that preceded thinking, and was therefore not yet sullied by heretical conceptions and interpretation. Spaniards hoped to obtain this *experiential knowledge*, and Amerindians seeking legitimacy for their arts, trafficked in experience as well. The duly renown Jesuit scholar José de Acosta codified this perspective into natural philosophy by separating earthly existence between culture and nature, “moral history” and “natural history.” Knowledge pertained to the former, and experience to the latter. By this distinction, however, Indian knowledge was not real knowledge, it was only culture – fanciful culture. And as missionaries became increasingly frustrated in their efforts to bring the New World into God’s embrace, they became increasingly certain that Satan played with the Indians’ heads. He muddled superstition and nature so much that although deep beneath their thoughts may be a kernel of truth, the Indians were incapable of ever unearthing it. They were awash in culture – demon-rich, deceitful, senseless culture.

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Experiential Medicine

Bernardino de Sahagún’s monumental life’s work, culminating in the the unpublished manuscript known as the *Florentine Codex*, was the most significant mid-century attempt to record and appropriate indigenous medical practices. Born in the town of Sahagún in Tierra de Campos in 1499 and educated at Salamanca, Sahagún departed for New Spain in August of 1529. It wasn’t until another nineteen years had passed, though, that he began what was at the time (and for long afterward) the most elaborate project to master the native Nahuatl language and document Mexican culture and history.

Sahagún was firstly motivated by religious zeal. By this point in colonization, it was apparent that the first missionaries, the twelve Franciscan friars in the formation of the Lord’s disciples, had prematurely declared their mission accomplished and that converting the continent would require a deeper kind of evangelism. Some missionaries resorted to violence, torture, and terror to compel the fear of God, but Sahagún sought to first know his enemy. Towards this end, he imagined himself a healer of sick souls:

The physician cannot advisedly administer medications to the patient without first knowing of which humor or from which cause the ailment derives.... Preachers and confessors, who are physicians of the soul who cure spiritual ailments, must have practical knowledge of spiritual medicines and ailments.... In order to preach against [idolatrous rites], and even to know of their existence, it is

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86 For which he was renamed, as was the practice for men of the regular orders.

87 On the discovery of Satan’s persistence despite the missionary project, see Fernando Cervantes, *The Devil in the New World: The Impact of Diabolism in New Spain* (New Haven, CT: Yale University Press, 1994).

necessary to know how they were practiced in pagan times, [because] through our ignorance, they do many idolatrous things without our understanding it.  

But while evangelism runs through each chapter of the Florentine Codex, and although on numerous occasions Sahagún justified his work in this way, this impulse is not what grants his “universal history of the things of New Spain” its singularity. Rather, as Miguel León Portilla explains, it was Sahagún’s capacity to suspend judgment, and evident appreciation and even respect for Mexican culture that inspired the incredible detail and diligence he brought to the self-assigned task of documenting native culture.  

As he explained in the prologue of the first volume, Sahagún was dismayed over the reflexive and uninformed condemnation of Mexican society; therefore, he wrote, “I shall avail myself of all this work to assay the carat [worth] of this Mexican people, which has remained unknown up to now.”  

But more than tempering the Spanish disdain for the Indian, Sahagún even suggested that Europeans, at least those residing the Americas, could learn a few things from their indigenous subjects. While without a doubt he was a fervent Christian missionary, Sahagún was, to a notable degree, open to intersubjective exchange with this other-worldly other; in other words, he was open to the “hermeneutical pain” of being fundamentally affected by the other.  


91 Quoted in León Portilla, 136.  

the Mexican moral teachings, or *huehuetlahtolli*, the “sayings of the ancients,” which he thought would do profligate and licentious Spaniards a great deal of good.\(^93\) Responding to the widespread accusation of *peninsular* Spaniards that the climate of the “torrid zone” had degenerative effects on the Spanish constitution, and to the corresponding anxieties amongst Creoles residing in the New World,\(^94\) Sahagún suggested looking to how the natives remedied the effects of the climate:

...because the Spaniards who dwell [in this land] and much more, those born in it, acquire the [same] evil tendencies [as the Indians].... I think the clime or climates of this land bring [this] about. But it is to our great disgrace (*verguençã*) that the native Indians, prudent and wise old men, know how to remedy the harm this land impresses on those who dwell in it, hindering the natural conditions with opposing practices....\(^95\)


\(^94\) Many authors have commented on the anxiety of Spaniards that the climates of the New World would adversely affect their bodily constitutions. According to contemporary, Galenic ideas about the physiology, the body was composed of four elements or humors: yellow bile (cholera), black bile (melancholy), phlegm, and blood. These combine in pairs to shape the body’s four qualities of dryness, coldness, wetness, and heat, respectively; and these corresponded to the earthly elements of earth, air, water, and fire. Each person was born with a baseline constitution, or complexion, that reflected the exact balance of the humors within their bodies. While the presence of all four was a necessary condition of life, most people’s bodies were comprised of an imperfect balance: one with a surfeit of yellow bile was choleric, while someone with excess blood was sanguine, he with too much black bile was melancholic, and she with a surplus of phlegm was phlegmatic. Some imbalance was not problematic, and indeed could explain personality and genius as well as bodily characteristics, but when the ratio became too disproportional, one fell ill. Thus illnesses were explained by their influence on the humors on the particular complexion of the patient. European colonists were specifically concerned that the humidity of the “torrid zone” would seep into their bodies causing the formation of excessive wet phlegm, which would counteract the dry and hot Spanish character, resulting in the Indianification of the body.


\(^95\) In this section of the Florentine Codex the columns of Spanish and Nahuatl text do not correspond perfectly. The quote is my translation of the Spanish version. Bernardino de Sahagún, “The Florentine Codex” (1577), book X, fol. 74r, World Digital Library, https://www.wdl.org/en/item/10096/.
Following the notion that the environment and climate of a territory had causative powers not only to provide or withhold health, but to affect morally and constitutionally the bodies within its realm. And following Gonzalez Fernández de Oviedo y Valdés and the many other authors claiming that only direct, experiential knowledge would provide accurate knowledge of nature in the New World, Sahagún concluded that native methods of steeling the body against the climate were the solution. But of course, this was tainted knowledge. “If [their] way of governing had not been so infected with idolatrous rites and superstitions... If [it] were cleansed of all idolatry and made Christian...” then Aztec forms of discipline could save the Creole of climate-induced sin. Heaped upon the valuable knowledge held by the Indians was a mountain of idolatry.

In the realm of healing practices Sahagún made his most concerted effort to effect such a cleanse native knowledge as his project transformed increasingly towards advocating for the richness of Indian life. This comes across starkly in his discussion of the healing professions. Sahagún presented his native informants as making a distinction between a good doctor, a *ticitl*, who attends to the body with materialistic forms of intervention, and the bad doctor, a *nahualli*, who he accused of witchcraft, superstition, and pacts with Satan. The codex consists of information about Mexica society documented in Nahuatl, with Spanish translation and paraphrasing. Regarding the *nahualli*, the Nahuatl half of the text reads, “[the *nahualli* is] a wise man, a counselor, a


97 Sahagún, “The Florentine Codex,” Book X; f. 74r.
person of trust – serious respected, revered, dignified… a caretaker, a man of discretion, a
guardian.”98 The Spanish translation states simply: “The Nahualli is correctly called a
witch who terrorizes men and sucks children’s [blood].”99 This was just one of many
instances where purposeful mistranslation on Sahagún’s part denied the possibility that a
nahualli could in Aztec eyes be good.

The nahualli (plural: nanahualtin), though, was a central figure in pre-Hispanic
Mexica communities, a ritual specialist whose basic function was to manage and curtail
disorder through divination, celestial manipulation, and sacrificial interventions.
Nanahualtin were healers, but their role extended far beyond that, as they were generally
responsible for preserving the community in the face of cosmic imbalances.100 It is none-
too-surprising that the friar would balk. But what makes his translation fascinating is not
the vilification, but the projection. Full of paternalistic fervor, Sahagún was attempting,
for their sake, to put the best Indian foot forward for Spanish readers. In doing so, he
presented the Mexican medical culture as conforming quite nicely to what he believed to
distinguish legitimate and illegitimate medicine in Europe.

Yet the legitimacy of healing practices was by no means a stable convention in
Europe. As Sahagún attempted to distinguish the good ticitl (doctor) from the evil
nahualli, he was judging a profession that was in flux. The dizzying array of healing
practitioners, from the academic médicos to the relatively stable professions of

(Salt Lake City: University of Utah Press, 2012), 31.
100 Roberto Martínez González, “Sobre la función social del buen nahualli,” Revista Española de
apothecaries, surgeons, and barbers, to local healers, such as midwives and other “empirics,” made for a dense field of interacting medical cultures and competing notions of authoritative knowledge.\textsuperscript{101} In the loftier academic realms, the 16th century was a peak moment in the long and slow ascent of physiological and anatomical knowledge over the philosophical, Aristotelian medical theory of the Middle Ages. The period also saw the rapidly rising prestige of “empirics,” or practical healers, who had long been denigrated by their university-trained betters.\textsuperscript{102} As vernacular printing and humanist modes of reading made esoteric knowledge more widely accessible, the growing power, visibility, and interconnectedness of the practical healing arts elevated trial-and-error craft knowledge as a legitimating epistemology.\textsuperscript{103}

Such winds of Renaissance humanism did not bypass Spain. Sahagún’s \textit{alma mater}, the University of Salamanca, was particularly influenced and influential; there Sahagún was undoubtedly exposed to the changing intellectual currents.\textsuperscript{104} Once in New Spain, he used and adapted the new appreciation of craft knowledge to characterize and legitimize the \textit{ticitl} healer, even to the extent of entirely dissolving gender as a criteria of professionalism. Thus, he ventriloquizes the Mexica:

\begin{quote}
The good doctor is very familiar with the properties of herbs, roots, woods, minerals, and in knowing them, has much experience, and is not ignorant of the secrets of medicine. The good doctor knows how to cure the sick, and do so for
\end{quote}

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\textsuperscript{102} Nancy G. Siraisi, \textit{Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice} (University of Chicago Press, 2009), 78–114.
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\textsuperscript{104} León Portilla, \textit{Bernardino de Sahagun, First Anthropologist}, 43–49.
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their benefit, [she] almost brings the dead to life, improving them, or healing them with the cures she gives. She knows how to phlebotomize, to effect a purge, give medicines and administer salves.\(^{105}\)

In Europe, these practices (such as phlebotomy and purging) depended upon classical physiological theories of the body and environment (complexions and humors, see footnote 16) for foundation. But Sahagún suggested that the Indian healers arrived at the same practices independently, without the European canon of Aristotle, Galen, Hippocrates, or Avicenna. He articulated, therefore, almost no description of Mexican explanations of how these processes worked. As will become even clearer in his treatment of *materia medica* below, Sahagún implied a common sense attitude towards curative effectiveness. These were, “secrets of medicine,” available to anyone with careful insight – canonical knowledge being unnecessary.

This explains one of the curious aspects of this part of the codex. In an unusual gesture, Sahagún concluded his treatment of native healing arts by citing his sources and justifying their authority:  
“The above record of medicinal plants and of other medicinal things was relayed by the doctors (*médicos*) of Tlatelolco de Santiago, elders and very experienced in matters of medicine, who all cure publically....”\(^{106}\) He then listed the names of his seven informants. While elsewhere Sahagún cites his sources to validate his ethnographic accounts, here the purpose is to validate indigenous knowledge of nature,\(^{107}\) validation which he based on experience weighed against public opinion. Once more,

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\(^{106}\) Sahagún, Book XI; f. 181v.

\(^{107}\) Such as in Book X, folio 114v.
theoretical learning is superfluous; instead immediate experience of nature speaks truth to all men and women, even the Mexica.

Sahagún was by no means the first to invent such a ruse, that is, validation on the grounds of experience. In fact, it is likely that this was a much more common strategy by Amerindian specialists to bring legitimacy to their professions under the early colonial regime. The Badianus Manuscript, for instance, penned in 1552 in Tlatelolco, was the first (known) attempt to de- and re-mystify native healing practices under a mantle of such populist empiricism. The booklet, an illustrated herbal of ailments and their remedies, was authored by Martín de la Cruz, a Mexican instructed in the Christian doctrine in the Franciscan College of the Holy Cross. Writing as he was for the son of Viceroy Antonio de Mendoza, hopefully for “no other reason than to commend us Indians, even though unworthy, to His Holy Caesarian Catholic Royal Majesty,” he knew quite well the importance of self-censorship. Unable to brandish Mexican learning or Aztec institutional authority, he justified native knowledge with experience, as was made quite clear in the manuscript’s title: “A little book of Indian medicinal herbs composed by a certain Indian, physician of the College of Santa Cruz, who has no theoretical learning, but is well taught be experience alone.” For good measure, de la Cruz’s peer Juan Badiano translated the booklet into Latin, giving it the approximate accoutrements of high academic style.

108 Martín de la Cruz, The Badianus Manuscript, Codex Barberini, Latin 241, Vatican Library : An Aztec Herbal of 1552 (Baltimore: Johns Hopkins, 1940), 205.
109 Cruz, 205.
For both de la Cruz and Sahagún, the impossibility of justifying native medical practices on a foundation of indigenous theory left a fundamental emptiness, an emptiness then filled with “experience.” Then, as now, experience was supposed to be self-evident as a mode of gaining knowledge, fallible due to its humble subjective nature, but innocent because of its cosmic abstention: experience might mislead, but at least it made no claims against God. This is what was at stake in Sahagún’s juxtaposition of good *ticitl*’s “secrets” and the bad *nahualli*’s “sorcery.”

Sahagún’s secrets were not portents or miracles, in contrast to earlier usage. It was no mere figure of speech when on his first voyage Columbus sighted a dolphin, birds, and weeds drifting from the west and declared, “Whence I trust that the High God in whose hands are all victories, will very soon give us land.” The Admiral of the Ocean Sea was drawing on a timeless tradition (and his own millenarian fantasies) of seeking reassurance in God’s secret way of speaking through things and events. Long before, St. Augustine had warned that such wonders were not knots for untying by mortal minds, lest a megalomaniac sought to replicate Satan’s defiance of God. Nature was God’s secret language, and man could hope to understand nothing more than a few inklings and clues.

But this was not what Sahagún meant. For him, nature’s secrets, while potentially huge in human affairs, were mostly beneath God and the angels, at least the good ones.

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Secrets were nature’s alone. Such a notion, of a natural realm ruled by regularity, and most of the time autonomous from supernatural interventions, first began to gain popularity among philosophers in Europe in the late twelfth century. Historians often point Albertus Magnus and his most famous student St. Thomas Aquinas, who set God’s interventions “apart from the order implanted in natural things.” It is not that God did not still intervene in the world; He did, but these were rare miracles in the strict sense. Beneath these, the manifest world was full of less vexing wonders and secrets: they were just beyond known nature, and it was possible to bring them into the fold of knowledge. It was the duty of the philosopher to disabuse the base and ignorant masses of their belief in supernatural and demonic forces and to reduce wonders to the rules and regularities of nature.\textsuperscript{112}

It is not at all surprising that Sahagún would have been exposed and attracted to such currents of thought, educated as he was at the University of Salamanca while it was a mecca of humanist thought. What is surprising is the difficulty he had applying this notion of nature to New Spain. For, while the good doctor’s secrets were devoid of occult powers and (supposedly) reduced to natural causes, the bad doctor’s sorcery remained replete with demons and the supernatural. This is the crux of the Sahagún’s treatment of native medicine, and, more generally, of the natural history of New Spain. Indeed, it was a puzzle that would trouble Creole intellectuals for generations to come.\textsuperscript{113} Essentially, nature was bifurcated. For the good – the Christian and the redeemable Indian – useful natural powers were those mobilized by the human mind; for the idolater

\textsuperscript{112} Daston and Park, 120–30.

\textsuperscript{113} Cervantes, \textit{The Devil in the New World: The Impact of Diabolism in New Spain}. 
and the “bad doctor,” witchcraft and “pacts with the devil” unleashed Lucifer’s might and the supernatural animism of his army of demons.

Sahagún’s effort to cleanse healing practices of the taint of sorcery and to reduce them to an isolated and independent realm of natural causation is clearest, and reaches its most absurd proportions, in the silences around the use of *peyote* and *ololiuhqui*. Historians have often made an improper distinction about the use of these hallucinogens. Bernard Ortiz de Montellano, for instance, claims that they were distinctly used as elements of Nahua “supernatural” medicine – that they were used to create balance in the cosmos – and insists that this was distinct from naturalistic remedies that worked on the body. But such a distinction is anachronistic, and rather, corporeal equilibrium and cosmic balance were understood to be mutually imbricating. In other words, diseases consisted of both types of factors and could be altered by both types of cures. This dualism between natural and supernatural medicine (as it pertains to the Spanish colonies) was forged by the Spanish missionaries and naturalists, and has since misled historians.

Sahagún placed peyote and ololiuhqui on the *nature* side of the dualism, reducing their potency to their corporeal effects. Of peyote, he recorded simply that, “It is a fever medicine. It is eaten, it is drunk moderately, just a little.” And of ololiuhqui, he wrote that it aids “fevers of the stomach”: “Thereby that which was in his breast comes out his

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rectum; he purges it.”  
Contrast this to the early 17th century self-appointed inquisitor Hernando Ruiz de Alarcón (who we will revisit below), who focused on the supernatural side of the dualism: “It should be carefully noted how much these miserable people hide this superstition of the ololiuhqui from us.”  He isolated the mental, or spiritual, effects of the drugs, which he saw as opening the mind, otherwise defended by reason, to the devil’s direct intervention: “he tells two thousand hoaxes, among which the Devil usually includes some truths, so that he has them deceived or duped absolutely.”  
Sahagún’s and Ruiz de Alarcón’s divergent attitudes towards these hallucinogens constituted the options available to Spaniards as they faced an alien medical culture. They could be all-natural, and thus salvagable, or all-psychical, and thus clouded by idolatry; but they could not be of both mind and body.

Sahagún’s record of healing herbs and minerals and their applications were intended not only for ethnographic purposes, but with the expectation that they both redeemed native culture and were useful to Spaniards, especially those residing in New Spain.  This, however, was not fated to happen, as neither were Sahagún’s other

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116 Sahagún, 12:165.
118 Consider the following quote: “A similar thing happened to another person who had the same kind of problem. Upon being consulted, the ololiuhqui – and in truth the devil – answered that in such and such a village at such and such a time…. Because of this or that thing they had angered the ololiuhqui.” Ruiz de Alarcón, 60.

In Sahagún’s lament on the fate of conversion efforts and his college at Tlatelolco, he gives a hint of the source of his enthusiasm for improving medical knowledge: “I have great misgivings that this is to be
ambitions for his work. Rather, in early 1577 (or late 1576), anxiety mounted in Madrid regarding Sahagún’s project; King Phillip II wrote to Viceroy Martín Enriquez:

we have come to understand... that Fray Bernardino de Sahagún... [is writing] a copious compendium of all the ceremonial rites and idolatries that the Indians use in their infidelity... [it would be] in no way suitable that this book be printed and neither should it be circulated in any way in [New Spain]... when you receive this my decree... you will, at the first opportunity, and with much caution and diligence, procure these books and without leaving neither an original nor any copy, you will send them to my Council of the Indies for safekeeping. You are advised to under no circumstances allow any person to undertake works, in any language, regarding the superstitions or way of life of the Indians; this would be in the best service to God our Lord.120

Once remitted across the Atlantic, the books would not become, as Sahagún hoped, the intellectual fulcrum for reinvigorating the work of Christianizing the Indians. Nor is there any indication Phillip II took notice of them. Besides a handful of colonial intellectuals (Juan de Torquemada, Antonio Herrera, and Agustin Vetancurt),121 who poached a few pieces for their chronicles, the tomes were paged through by few fingers until the nation-building project of the 19th century inspired their ultimate publication in Mexico in 1829. In the meantime, if the king did peruse the manuscripts, Sahagún’s completely ruined (the college)... it could have provided great good to this entire Indian state, and the king, our lord, would have more subjects than he has or will have in it; for they decrease constantly. And the cause [of the decline] which I have personally witnessed, is that in the plague of thirty years ago, most of those who died, died because there was no one who knew how to let blood, nor to administer the medicines as required. And [they died] of hunger. And in this present plague the same thing is happening. And in all those which will occur it will be the same until [the natives] are all gone.

“And if there had been care and foresight through which these Indians had been instructed in grammar, logic, moral philosophy and medicine, they could have aided many of those who died, because in this city of Mexico we witness without our own eyes that those whom they visit to bleed and to purge, as is proper, in time recover and the rest die. And since the Spanish doctors and bloodletters who know how to do these things are few, they help few. And already the bloodletters and doctors are almost exhausted and sick, and dead. And now there is no one who can or will visit and help the poor Indians. And so they die, having neither remedy nor aid.” Sahagún, “The Florentine Codex,” Book X; f. 84r-84v.

120 Philip II, “Recogida de Ejemplares : Obra de Fray Bernardino de Sahagún” (April 22, 1577), 1, Patronato Real 275, R.79, AGI.

121 León Portilla, Bernardino de Sahagun, First Anthropologist, 12–13.
attempt to isolate inoffensive elements of native society from the heretical aspects was unconvincing. The king and his counsel saw neither the value of indigenous culture, nor the possibility of “cleaning” it, that Sahagún so hoped he would relay.

The Empire of Medicine

But then, maybe they did. Seven years prior, this same king, Phillip II instructed Francisco Hernández, physician of the royal chamber and protomédico (chief regulator of medical practice) of the Indies, to,

    embark and go first to [New Spain]... because we are informed that more plants, herbs, and medicinal seeds are to be found there than elsewhere.... you shall consult, wheresoever you go, all the doctors, medicine men, herbalists, Indians and other persons with knowledge in such matters, if it seems to you that they have understanding and knowledge, and thus you shall gather information generally about herbs, trees, and medicinal plants in whichever province you are at the time. Further, you are to find out how the above-mentioned things are applied, what their uses are in practice, their powers, and in what quantities the said medicines are given, as well as the places in which they grow and their manner of cultivation, and whether their habitat be dry or moist, or if they grow among other trees and plants, and if they occur in different varieties, and you shall write down descriptions thereof... you shall experience and test first hand all the above-mentioned if you can, but otherwise, you are to obtain information from the said persons, and once you are satisfied that you have an accurate account, you shall describe their nature, virtue, and temperament. You shall cause to be sent here all the medicines or herbs and such like that you may see in those parts, provided that they are noteworthy in your judgment, and do not already grow in these realms.122

While indigenous culture, writ large, did not seem to the king to hold the moral and disciplinary lessons Sahagún imagined, this did not mean a more surgical appropriation of knowledge was not possible.

It is probable that the two men met and even corroborated in Tlatelolco, where both were known to be been during Hernández’s stay in New Spain (1571-1577). Nonetheless, the two represented separate visions of how local knowledge could be captured. While Sahagún, the “physician of the soul,” attempted to exorcise medical knowledge, Hernández, the physician of the body, aimed incorporating and subsuming what the indigenes had come to know through centuries of experience into the European canon. His objective was unified, global knowledge of the natural world.123

Hernández’s scientific expedition followed the botanical integration of the world, known now as the Columbian exchange, instigated by the conquest of the seas by the first global empires, the Spanish and the Portuguese. Cows, pigs, sugar, wheat, weeds, and many others of nature’s little helpers colonized the American colonies for their own species, usually to the mutual advantage of the Spaniards who shuttled them over the seas. Going eastward, the botanical upstream to Europe was far thinner, but among the “parrots, monkeys, griffins, lions, gerfalcons, neblís (another kind of falcon), azors (and another), tigers, wolves, cotton, cochineal (insects), horns, sugars, copper, brazil (wood), ebony, blue dye,” New World medicinals held a prominent place and great visibility.124

123 It is worth noting that this heroic vision of scientific globalism is usually credited to Alexander von Humboldt, the Prussian noble scion who famously toured the Americas at the turn of 19th century and became a scientist celebrity on both sides of the Atlantic. Hernández and his imperial backers, we might say, were more than two centuries ahead of their time. On Humboldt as a celebrity cosmopolitan scientist, see, Aaron Sachs, The Humboldt Current: Nineteenth-Century Exploration and the Roots of American Environmentalism (New York: Penguin Books, 2007).

124 That the “exchange” was not as neutral as the term suggests is now well known by scholars. This will be a matter of import in the following chapters. Alfred W. Crosby, The Columbian Exchange: Biological and Cultural Consequences of 1492 (Greenwood, 1973); Alfred W. Crosby, Ecological Imperialism: The Biological Expansion of Europe, 900-1900 (Cambridge: Cambridge University Press, 1986). Quote from, Nicolás Monardes, Dos libros de las cosas que traen de nuestras Indias Occidentales (Seville: Sebastián Trugillo, 1569), Aiiii.
In the years before he left Madrid, where Hernández was appointed Royal Doctor to the King,Spain was abuzz about the medicinal plants trickling into Seville with each new fleet of galleons returning from the new Iberian colonies in the West and East Indies. Although by no means alone in his enthusiasm, the Sevillan physician Nicolás Monardes was by far the greatest soapboxer for New Spanish materia medica, and his books on the subject reached avid readers and translators across the subcontinent and the British Isles. In addition to being a university educated doctor and a “well-formed scientist,” Monardes was “the quintessential Sevillan trader,” as Marcy Norton puts it. Through family and professional contacts, Monardes’s networks extended across the Atlantic, networks which he mobilized for his own mercantile investments, with considerable investments in slaves, minerals, dye-stuffs, and medicinals. With no small interest in the trade of New World medicines, Monardes set himself to clarifying the scene of the chaotic seaside bazaar by explaining the uses and virtues of the herbs that were, he claimed, flying off the shelves with neither directions nor warning labels. But while he did succeed at applying familiar names and Galenic temperaments (hot, cold, dry, wet) to each medicine, his work mostly served to pique interest, awe, and

125 An honorary position, not actually attending to the king’s health.

126 Before the end of the 16th century, Monardes’s writings were translated into Latin, Italian, English, French, German, and Dutch.

127 José María López Piñero had dedicated his life’s work to resurrecting Spanish scientists from the great condescension of north European historiography. While Monardes can be redeemed as a “scientist,” it is most important to note that he was not just that. López Piñero, Medicina e historia natural en la sociedad española de los siglos XVI y XVII, 113.

anticipation at the New World’s salubrious bounty. The novel medicines, “cure the
cureless diseases and have effects that appear the things of miracles.”

The panacea was coming to Spain, and Monardes was going to ride that wave; Hernández, in contrast, would trace it back to its origin.

Importantly, Monardes saw the panacea as deriving from the new cultures and cultural mixes encountered in the Indies. Seville was, during Spain’s Golden Age, as polyglot and cosmopolitan of a place as there was in Europe, heir to Venice and Florence. As Miguel de Cervantes put it, “a place so well-suited to finding adventures, since more were to be found there on every street and around every corner than in any other city.”

Amongst gold and silver, and plants and animals “never before seen,” seafarers and traders returned from the corners of the globe hawked the wares and cultures of distant lands. It was in this intercultural transfer that Monardes saw great riches for medicine and for himself. And no culture had so much to offer as the Mexica: “if one could investigate and experience the great diversity of medicines that the Indians sell in their markets or tiangez, it would be a matter of great utility and advantage, to see and know their properties, and experience their various and grand effects, which the Indians proclaim....”

Even the cultures of the slaves sacked from Africa were, in Monardes’s eyes, probable sources of medical wisdom. To promote escuerçonera, a snake venom antidote, Monardes recounted how fatal viper bites were reaching epidemic proportions in the West Indies until “a Moorish slave from Africa” recognized a helpful root, and

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129 Monardes, *Dos Libros de las cosas que traen de nuestras Indias Occidentales*, Di.
131 Monardes, *Dos Libros de las cosas que traen de nuestras Indias Occidentales*, Hvii.
became so successful curing bites that “he became not only free, but rich,” and remained so for as long as he could keep his cure secret.  

But secrets, for Monardes the merchant doctor, were not for the keeping.

Historians have typically placed Monardes with the wrong company. North Atlantic historians shelve him with Peter Martyr, Amerigo Vespucci, and other chroniclers of the Americas who so inspired English and Dutch imperial adventures; historians of medicine (if they are aware of Spanish science at all) seat him at the opening gates of modern pharmacology, a place he does appear to deserve. But, in 1565, when Monardes published his first work on “the things they bring from the Indies,” his more immediate kin were the writers of popular books of secrets. A new genre appealing to new audiences created by the proliferation of printing presses, books of secrets were populist exposés that sought to debunk erudition and esoteric knowledge and, through clear recipes, impart to the lowly reader the simple truths of nature and health long obscured by pedantic sophistry. Such authors, who began to win wide circulation in the middle of the 16th century, supplied the increasing market demands for quick and cheap cures, and fashioned themselves in a heroic role, divulging what was once withheld. They were the first celebrity health writers.

Like other such authors, Monardes appealed to bodily health as the ultimate good, “more excellent and necessary than worldly goods,” which a reader could access with the

\[\text{132 Monardes, Rv-Rvi.}\]

\[\text{133 In contrast, profesional doctors were generally hesitant to promise quick recovery because of the risk to their reputation. Siraisi, Medieval and Early Renaissance Medicine, 117.}\]

purchase of the book. But, compared to his competitors who trafficked in the secrets of alchemy or kitchen medicine, Monardes had an incomparable advantage in Seville, “the port of call for all the West Indies”:

As new regions and new kingdoms and new provinces have been discovered by our Spaniards, they have brought us new medicines and new remedies with which many diseases are cured that would otherwise be incurable and irremediable. Although some know of such things, not all do: and for this reason I proposed to address and write of all the things that serve for the art and use of medicine, that come from our West Indies.\textsuperscript{135}

In his charismatic appeal to the reader, Monardes suggested it was his duty, his Hippocratic duty,\textsuperscript{136} to divulge the secrets of Indians and slaves. The cultures of the colonized belonged to each and all.

By the time Phillip II instructed Hernández to go to the Indies, Monardes was famous. Picking up on this enthusiasm, Hernández and Phillip II envisioned Spain as the medical empire of the world. As the doctor wrote the king on the eve of his voyage: “As I understand it, this will be such a grand enterprise that there will be no need to bring to the Indies medicines from Spain, nor to Spain from Alexandria, and not only will the whole world rejoice, but it will be astounded, and Your Majesty will gain even more renown and eternal fame, more than princes of old ever received from their victories and empires.”\textsuperscript{137} For an empire of persistently questionable legitimacy,\textsuperscript{138} it seemed a possibility worth looking into.

\textsuperscript{135} Monardes, Dos Libros de las cosas que traen de nuestras Indias Occidentales, Avii.

\textsuperscript{136} If you will permit me the anachronism.


\textsuperscript{138} This largely began as more and more legal thinkers in the early 16th century in Europe questioned the authority of the Pope to bequeath the entire western hemisphere (west of the line of Tordesillas) to Spain. See Anthony Pagden, Spanish Imperialism and the Political Imagination: Studies in European and
This was not just the persistent bluster that plagues every letter to the king. Rather, Hernández’s expedition was only the latest incarnation of the crown’s attempt to discipline and rationalize knowledge production for the benefit of the imperial state, as instituted most dramatically in the founding of the Casa de Contratación, the Counsel of the Indies, and the survey inquiries of the Indies known as the relaciones geográficas. Medicine had already fit into vision of an empire of knowledge. In 1550, for instance, the crown established the Royal Botanical Garden in Aranjuez, whence he sent herbalists across the Iberian peninsula. As the doctor Francisco Franco explained: “The King don Phillip, our lord, has sent an diligent herbalist to travel through Andalucía with a catalog of herbs, in search of stands of them to take to Aranjuez, where His Majesty... creates great gardens for every type of plant, those most beautiful..., [as well as those] useful for medicine.” Hernández, as protomédico of New Spain, was to extend this effort to what was believed to be the most botanically rich part of the New World colonies; the product would be encyclopedic: “Your Majesty will have a model, which the world will admire.”


140 From Libro de enfermedades contagiosas y la preservación de ellas (1569), quoted in, López Piñero, El Códice Pomar (ca. 1590), el interés de Felipe II por la historia natural y la expedición Hernández a América, 14.

which any antidote or remedy could be ordered at will: “Thus Your Majesty can order the most useful things, and whatever else seems necessary, to be shipped from here to Spain for the benefit and health of the state.” Hernández’s mission, in sum, was to harness under state control, and to state advantage, the process of medical globalization set in motion by the conquest of the seas, and furthered by mercantile interests like Monardes’s.

Hernández was explicit that this empire of medicine would be built on a foundation of indigenous knowledge. Hernández himself would serve as the “center of calculation,” as Bruno Latour terms it, arranging the knowledge in uniformity: “all the natural things of [Santo Domingo, the Canaries and China should] be painted in miniature, or at least the most important things, with all their constituent parts and colors, and that their virtues and temperaments [should] be described from the accounts and experiences of the natives, and [then] sent to me so that I may make the style consistent and have it drawn my way, and add it to the rest.” Back in Seville, Nicolás Monardes sat at the mouth of the great funnel by which the world came to Europe; there he touched, examined, tested, and named the products of distant cultures as they passed through. In contrast, Hernández and the many others he imagined following his lead, all representatives of a distrustful imperial state, marched up and out of the funnel, eliminating so many merchant intermediaries, to collect and absorb the knowledge of hundreds of conquered societies.


The need for such clarity was certain. Monardes’s bestseller, and the few others like it, were at times unbearably vague and imprecise, almost without informative illustrations, and littered with unqualified statements that “the Indians use it this way,” or, “they use it as a great cure,” or, “it is a cure of the Indians and negros.” What is most significant and obvious in the writings of the mercantile doctor is the ease and readiness with which he authoritatively claimed and renamed the medical things passing through the port city. *Xilo* became balsam, hot and dry to the second degree, in galenic terms; *ocoçol* became liquidambar, hot in the second degree, humid in the first; and *guayacan* became *palo santo* (holy stick). By 1565, some of these had been around Iberia for decades. Tobacco first crossed the Atlantic in 1559, and long before *guayacan* was widely regarded as the best treatment for the “French disease,” syphilis. “Celebrated the world around,” Monardes put it. As early as the 1530s New World “balsam” had become embroiled in intra-professional feuds as physicians debated its efficacy relative to the legendary balsam of Egypt, which the cheaper colonial import would hopefully replace. But in truth, by the time of Hernández’s departure for Mexico in 1571, most of these imports were exceedingly rare and expensive. What Monardes did, in crafting

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144 Principally by Christobal Acosta, Pedrarias Benavides, and Juan Fragoso. Christobal Acosta, *Tractado de las drogas, y medicinas de las Indias Orientales, con sus Plantas debuxadas al bivo* (Burgos: Martín de Victoria, 1578); Pedrarias Benavides, *Secretos de Chirugia especial de las enfermedades de Morbo galico, Lamparrones, Mirracrich, y asi mismo la manera como se curan los Indios de llagas y heridas y otras pasiones en las Indias* (Valladolid: Francisco Fernández de Córdoba, 1567); Juan Fragoso, *Discursos de las cosas aromáticas, arboles, y frutales, y de otras muchas medicines simples que se traen de la India Oriental y sirven al uso de medicina* (Madrid, 1572).

145 Monardes, *Dos Libros de las cosas que traen de nuestras Indias Occidentales*, Evii, Fvii; Benavides, *Secretos de la Chirugia*, folio 12v.

the charismatic persona as the revealer of the true secrets of the medicine of the Indies, was to collect and align the scattered rumors, experiences, and opinions that floated about, and to confirm the magic and power of the fetishized Indian wisdom, now corroborated by the “experience” of the well-credentialed Sevillian doctor. Monardes primed the market.  

Hernández’s imperial project was, however, something entirely different. Universal in scale (befitting the “Caesarian and universal empire”), Hernández envisioned his accumulation of medical knowledge as one significant part of a comprehensive, and research-based natural history of the western hemisphere. This would, coupled with Pliny the Elder’s *Natural History*, constitute encyclopedic knowledge of the Old and New Worlds.

Like Hernán Cortés landing at Veracruz with 630 men to conquer a continent, Hernández disembarked in the same port, with his geographer and son in tow, facing an entire hemisphere of nature to master. He required help – native help – and a lot of it: “In all of this, great care has been taken that no plant is painted unless I have seen it ten or more times in different seasons, smelled and tasted all of its parts and asked more than twenty Indian doctors, each one individually, and considered how they agree and

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147 We know, however, that this market never did arrive as Monardes and others wished. John Slater, “The Green Gold Fallacies: Myth and Reality in the Transatlantic Trade in Medicinal Plants,” in *Geografías médicas: Orillas y fronteras culturales de la medicina hispanoamericana (siglos XVI y XVII)*, ed. José Pardo Tomás and Mauricio Sánchez Menchero (Mexico: UNAM, 2014), 99–122.

148 Which, in good Renaissance humanist style, Hernández translated to the vernacular.

Hernández relied on native informants extensively as collectors, translators, scribes, painters, herbalists, and guides. These did far more than direct Hernández’s eyes, nose, mouth, and fingers to the flora of Mexico; indeed, they provided him the entire organizational scheme of his work. Finding that, as López Piñero puts it, “European botanical lexicon was incapable of integrating an addition of such gigantic proportions,” Hernández largely abandoned the project of naming the plants and animals according to European denominations. Rather, they were almost all recorded with their vernacular names, principally in Nahuatl, but also Tarasco, Otomi, and Taíno. More significantly, Hernández recognized native taxonomies as legitimate and useful. At times, they coincided with European categories, “The Mexicans call ocopétatl [...] all the herbs [...] that we call capillaries, because they have hairy roots....” More often, however, Hernández tacked back and forth between European and Nahuatl categories that overlapped, though not completely, such as philodendra and huacalxochitl. At times, native categories entirely overwhelmed the European ones. This is most striking in his treatment of agaves and orchids, organized around Nahuatl roots metl and tzauctli and the Taíno name maguei. Hernández’s global, encyclopedic “model” of the natural would be created by integrating native emic thought and theory into European natural history and taxonomy.

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151 López Piñero and Pardo-Tomás, Nuevos materiales y noticias sobre la Historia de las Plantas de Nueva España, 49.
152 Quoted in López Piñero and Pardo-Tomás, 50.
153 These and other examples are explained in greater detail in: López Piñero and Pardo-Tomás, 48–57.
This was a rescue mission: to save from obscurity the valuable botanical knowledge that he feared would die out with Indian culture, or even the Indians themselves. Like Sahagún, Hernández saw the former Aztec empire as the golden age of the Mexica, when “for the governance of the state, as well as in service to their gods” the flabby, impulsive, and passionate bodies and minds birthed into the world were molded into warriors, artisans, and governors of estimable discipline.\textsuperscript{154} Although Spanish conquest was God’s will, he believed, the decades since have amounted to a century of cultural declension. Nonetheless, both the doctor and the missionary hoped that fragments of the ancient wisdom still trickled into the present, as well as knowledge of “those herbs, minerals or animal parts that they have received, passed from hand to hand, as a birthright from their elders, and this they also teach to those who follow.”\textsuperscript{155} But while such knowledge once had been common and popular, beneath the weight of imperialism it was becoming scarce, recondite. “Either to protect themselves or due to their hatred of us, they hide away in arcana what they have come to know and have found out, or because they have forgotten they ways of their elders (for such is their simplicity and laziness) they can say nothing worthy of record.”\textsuperscript{156} And worse yet, all this might be lost altogether if the current mortality rate of the Indians continued: “a great number of the doctors and Indian artists who contributed to this and made sense of it have died in

\textsuperscript{154} Sahagún, “The Florentine Codex,” Book X, f. 71r.
\textsuperscript{156} From \textit{Antigüedades de la Nueva España}, quoted in, Boruchoff, “Anthropology, Reason, and the Dictates of Faith in the Antiquities of Francisco Hernández,” 94.
the last plague (known as *cocoliztli*, 1576). Like a twentieth-century linguist in Papua New Guinea, Hernández hoped to salvage the remains of what he saw as a dying civilization, the greatest of the Americas.

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Figure 6: Pueblo y corregimiento de Suchitepec, 1579
Hernández’s was the first great scientific mission to the New World; he fully deserves a place of prominence, long denied to Hispanic scientists, in the canon of Western science. Steeped in Renaissance humanism, an experienced field researcher, and a doctor of impeccable credentials, Hernández was carefully selected by the court to extend imperial expertise over the nature of the colonies. Once in the Americas, he was an indefatigable and diligent researcher and scientist par excellence. Although he played

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158 As has long been a priority of historians José María López Piñero and Jorge Cañizares Esguerra.
the fiction that he was “the first and last author” of his work, his science was a collective endeavor. He understood this, and acknowledged until his deathbed the debt (albeit highly discounted) owed his native informants. While the doctor was instructed by the king to write a history of the “natural things” of the Indies, his actual research subject is better described as “second nature,” that is, nature already once chewed. Indeed, his writings have been of such incredible value to historical ethnographers precisely because his study of nature was actually an examination of nature as used by the Mexica and others. But while pre-columbianist historians have long wrung their hands over how pure his ethnographic detail might or might not be, more surprising for our purposes now is the intentionality with which Hernández sought to integrate native botanical knowledge into the European canon.

With the immensity of the task, and the clarity with which he saw the difficulty of translation, it is no surprise that at his death Hernández’s masterpiece remained unfinished and unpublished. The king had, on numerous occasions in his correspondence with the doctor, expressed deep interest. Phillip II was an avid collector of natural curiosities, and moreover, he expected Hernández’s research to be of great value to the empire, and requested that the volumes be sent in secrecy and kept completely sealed

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until their arrival at the throne. But this royal interest was not enough to push the project to completion.

Fundamentally, it was a change in expectations about the role of knowledge within the empire that aborted Hernández’s enterprise. By the time Hernández finally remitted his volumes to the crown in 1576, several years overdue, he had accumulated thousands of pages of material and hundreds of paintings and drawings of New World botanicals. Despite the recommendations of the Council of the Indies, the king suggested butchering the encyclopedic work: “Seeing how much the printing of [Hernández’s volumes] will cost, ... these books that I believe no one will buy, it would be best that an example manuscript be created with painted illustrations and other contents, and these summary materials can be released in small volumes and manuals so that the printing of these would not be so costly... and can be sold to the greatest public benefit.”

Although (as we will see in chapters 4 and 5), Hernández’s researches into materia medica in particular had a long and busy afterlife, by the end of the century, his attempt to integrate indigenous knowledge of nature into European thought met no better fate than Sahagún’s. While we can interpret the king’s words as simply a matter of counting pennies, or maravedís, the larger point is that the king saw that the traditional information technology of the academy and the court, that is, twenty gigantic volumes in Latin in the style of Pliny’s Natural History, as Hernández hoped, would be too resource intensive

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160 Phillip II, “Real cédula a Martín Enríquez, virrey de Nueva España, en respuesta a seis cartas de 8 de abril, 6 de mayo, 5, 10 y 12 de septiembre y 29 de octubre de 1571 y dos cartas de 6 de febrero de 1571 y 25 de enero de 1572” (May 18, 1572), Audiencia de México 1090, L.7, F.56R-63R, AGI; Consejo de Indias, “Consulta del Consejo de Indias” (August 3, 1576), Indiferente General 738; N. 218, AGI.

161 Consejo de Indias, “Consulta del Consejo de Indias” (March 20, 1578), Indiferente General 739, N. 60, AGI.
and nevertheless insufficient to effect the practical assimilation of indigenous natural
knowledge into Iberian life. Instead, he suggested, it should be broken up, and broken
down to the size and style of the books of secrets. Only thus would they spread across
the land, into the homes, pharmacies, and libraries of physicians and other healers. But
even this never happened.

Satan and Superstition

Still, Phillip II was prescient. At least in the short term, the projects of Sahagún
and Hernández to tear apart nature and culture and thereby distill untainted knowledge
failed. But while the Florentine Codex collected dust, and as the Accademia dei Lincei in
Rome struggled for seven decades to find money to print Hernández’s natural history,162
the wisdom contained within this work spread through unacknowledged borrowings
appended or incorporated into smaller volumes of secrets and medical recipes.163 At the
level of social history, medical syncretism proceeded (which will be the subject of later
chapters), nonetheless, in the realms of colonial policy, conscious and purposeful
appropriation ceased to be a possibility.

162 Simon Varey gives a thorough account of the many failed attempts to publish Hernández’s work until
the 1648-1651 Latin edition was finally released. S. Varey, “Introduction,” in Searching for the Secrets of
Nature: The Life and Works of Dr. Francisco Hernández, ed. R. Chabrán and D. B. Weiner (Stanford:

163 Including Augustín de Vetancurt, Teatro Mexicano, 1697; Francisco Hernández, Quatro libros. De la
naturaleza, y virtudes de las plantas, y animales, que estan receuidos en el uso de medicina en la Nueva
España, y el metodo, y correccion, y preparacion que para administrarlas (Mexico: Diego López Dávalos,
1615); Juan de Cárdenas, Problemas y secretos maravillosos de las Indias (Mexico, 1591); Juan de Barrios,
Verdadera medicina, cirujía, y astrología, en tres libros dividida (Mexico: Fernando Balli, 1607); Gregorio
López, Tesoro de medicina (México, 1672).
The cultural pluralism and exchange that persisted in qualified ways at times and places throughout the latter years of the *reconquista* and the first decades of rule in New Spain, all but evaporated by the close of the 16th century. Conquest was ceding to colony, as the *conquistador* generation passed and their excesses faded; as stable royal rule was extended to the viceroyalties; as the violence of the early Inquisition was tempered; as the *encomienda* coerced-labor system began to gradually give way to the less violent *repartimiento*; and as Indian and Spaniard were separated into the distinct legal circuits of the Republic of Indios and the Republic of Españoles. These changes, and the incipient growth of a permanently American Creole society, inspired the ossification of the ideological divide between conqueror and conquered. Forged from the uglier legacies of anti-Jewish and anti-Moorish oppression of late medieval Spain, colonial society began to construct the racial caste system and its ideology of blood purity.\(^{164}\) Earlier in the conquest, evangelizing missionaries permitted pre-Columbian rituals that coincided with Catholic ones, but then this instrumental tolerance faded into Manichaeism. Now any deviations from orthodoxy were no longer interpreted as lapses, but as devil-induced idolatry. Medicine, and indeed all knowledge of nature, became wrapped up in this new ethos and as Amerindian society was increasingly demonized, the projects of Hernández and Sahagún slipped beyond the colonial imagination.

The Jesuit missionary José de Acosta articulated the new ethos with clarity and brevity. Born in 1540 (or 1539), Acosta was educated in Alcalá and Salamanca, before (supposedly) pleading to be sent to the Indies. While Sahagún and Hernández made their

researches in and around Mexico City, Acosta traveled as a young missionary through Peru, Panama, and finally to Mexico, during which time he became dismayed at the course of evangelization and contemplated its revitalization. He returned to Spain in 1587 to study, write, and politic on behalf of the Jesuit cause. It was towards this end, as a prelude to a work on missionary theology, that he wrote his widely translated and circulated *Historia natural y moral de las Indias* (1590).¹⁶⁵

As the title suggests, Acosta split the universe between its natural and moral realms, the former referring to terrestrial existence, and the latter, to what we today would call religion or superstructure, or what he called “the customs and deeds of the Indians.” This dualism was a novel distinction,¹⁶⁶ one neither Sahagún nor Hernández assumed, but rather, worked towards through the complicated work of disentangling what seemed like practical medicine from heathen attachments. But by the end of the century, the heathen attachments overwhelmed the appropriable knowledge. This was the obvious conclusion, as Acosta wrote, of the evident tenacity with which the devil held New Spain, where “Satan was in his Rome or Jerusalem” until the arrival of the good word.¹⁶⁷ Through centuries of private dominion, isolated from the light of the Lord, Satan had constructed in the West Indies an evil mirror-world of Christendom, “to usurp and steal for himself all of the honor and glory that is due to God alone.”¹⁶⁸

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¹⁶⁵ José de Acosta, *Historia natural y moral de las Indias: en que se tratan las cosas notables del cielo, y elementos, metales, plantas, y animales dellas, y los ritos, y ceremonias, leyes, y gouiero, y guerras de los Indios* (Madrid: A. Martin, 1608).

¹⁶⁶ I follow Fernando Cervantes on this: *The Devil in the New World: The Impact of Diabolism in New Spain*, 25–33.


¹⁶⁸ Acosta, 304.
just as the Supreme God has sacrifices and priests, and sacraments, and religious persons, and prophets, and people dedicated to his divine cult and sacred ceremonies, so, too, does the devil have his sacrifices and priests, and his kind of sacraments, and people living in seclusion and feigned holiness, and a thousand kinds of false prophets.”¹⁶⁹ When Christopher Columbus arrived in the Bahamas, he remarked that the native islanders “have no religion”;¹⁷⁰ when Hernán Cortés marched into Tenochtitlan, he expressed perplexity at the preponderance of deities; but by 1600 such uncertainties dissipated and one thing was clear: the recipient of native worship was Lucifer himself.

According to Acosta, in the Americas Satan ruled the birds and the bees and the plants and the snakes just as well (if not better) than the Indians, and thus the latter’s knowledge of nature was not knowledge at all, but its inverse. “As heathen peoples are deprived of supernatural light, they also lacked philosophy and natural doctrine,” he wrote.¹⁷¹ To illustrate, let us return to ololiuhqui, the hallucinogen that Sahagún stated was but a fever reducer and purgative. Along with peyote, this became of the very symbol of superstition, ignorance of nature, and misplaced faith: its “effect is to deprive them of their senses,” which opens commune with the devil. Despite Acosta’s great ambivalence and inconsistency regarding whether Satan actively intervenes in the world and speaks to the idolater,¹⁷² this does not detract from his greater point, which is that the Indian knows not what he does. Ololiuhqui has real and naturalistic effects as an

¹⁶⁹ Acosta, 275.
¹⁷⁰ Columbus, The Four Voyages of Christopher Columbus, 64.
¹⁷¹ Acosta, Natural and Moral History of the Indies, 250–51.
¹⁷² As often as he accuses the Indians of consorting with the devil, Acosta also stated such contacts are flights of the imagination, or superstitions, in the modern sense.
anesthetic, conceded Acosta, but the Indian does not understand this: “Since it relieved pain they thought it was the effect of... divine virtue.” And this delivered them into the hands of charlatans, “who kept the ignorant tricked and deceived, making them come to their medicines and diabolical ceremonies.... And so they created innumerable superstitions in the common folk.” Acosta stood at the edge between the pre-modern and modern senses of superstition, and therefore he wavered between accusing the natives of pacts with the devil (which is to say, misplaced faith; i.e. pre-modern superstition) and of being dupes of their “ministers and teachers, whose whole purpose to deceive.” In the decades that followed, the modern sense of superstition would gain ascendency, a full century before it did so in northern Europe. In Acosta’s writings, this meaning was just starting to be articulated; and his work marks the beginning of the alienation of the Indian from real and immediate experience of nature. The Indian was becoming, so to speak, all culture – or enchanted.

There was still, however, a nefarious opening for appropriation. This grew out of the growing the rejection of the Thomist conception of a concordance between nature and the divine. Earlier natural philosophers relied precisely on this concordance as they sought in nature regularities that reflected divine provenance. However, by 1590, to Acosta nature was ruled by so many chance events and exceptions that the human mind

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175 For a thorough examination of Acosta’s rejection of the thought of Thomas Aquinas, see Cervantes, *The Devil in the New World: The Impact of Diabolism in New Spain*, 25–33.
could not rely hope to find godly order, but instead had to be nimble and pragmatic.\textsuperscript{176} Thinking was a faculty, a “sovereign gift... that man can know these plants and learn how to use them.”\textsuperscript{177} That is to say, real knowledge of nature is below belief, below “moral history, and outside of culture – thinking is, in a word, part of man’s earthbound and natural faculties, and there is nothing holy about it.

Although of strikingly different temperament, the maniacal inquisitor Hernando Ruiz de Alarcón expressed this same interpretation and showed how good medicine could be extracted from bad sorcery. While superstition accumulated through time, mounting to an excess of meaning and ritual, that did not mean that below it all there was not a seed of truth. Like a grain of sand to a pearl, superstition required an anchor in the real world. For instance, Ruiz de Alarcón railed against the use of a melodious incantation as part of the “Superstition That They Use for Pain in the Loins,” but this did not mean the remedy was ineffectual for its purpose. “Experience has well proved that those who suffer body pain... feel relief when their body is pressed on... and this kind of pressing they call tepápcholiztli. Concerning this, the false and superstitious doctors have introduced a deception with the excommunicated spells, attributing to words that which the act brings by itself.”\textsuperscript{178} Simply put, native medicine could be and was effective, although the native mind was unprepared to know it. The problem was that the natives use the incantations, “in their occupations and actions pertaining to inanimate things or directed towards things

\textsuperscript{176} Acosta, \textit{Natural and Moral History of the Indies}, 60, 87–88.

\textsuperscript{177} Acosta, 225.

\textsuperscript{178} Ruiz de Alarcón, \textit{Treatise on the Heathen Superstitions That Today Live among the Indians Native to This New Spain}, 1629, 188. Of course, Ruiz de Alarcón did not see any contradiction in the candles and prayers for Our Lady of Mercy. For other examples, see pages 73, 170 and 173.
not free [i.e. not having free will].”¹⁷⁹ They failed, in other words, to make the
distinction between the human and the natural, or nature and culture. This explained their
idolatry as well: they believe “that the clouds are angels and gods... and they think the
same things about the wind, because of which they believe gods live in all parts of the
land....”¹⁸⁰ The logic is obvious: if the Indian fails to separate nature and culture, and his
culture is wholly imbued with Satanism, then he can have no real knowledge of nature.
Still, however, there might be a mistaken grain of usable truth buried deep, beyond the
reach of Indian minds.

Conclusion

The writings of Bernardino de Sahagún and Francisco Hernández were the last
attempts before the 18th century in New Spain to systematically and purposefully record
indigenous medical knowledge for the purpose of integrating it into Spanish medicine.
As we have seen above, these projects teetered on the edge of heresy and delicately
attempted to separate the good and healthy from the bad and idolatrous. Through this
effort was born a distinction between knowledge and experience. The former was
decried as hopelessly embedded in “moral history” (roughly what we would call culture),
and therefore inextricable from Satanic influence and superstitious error. Experience,
however, was conceived as prior to knowledge – the moment of perception and sensation
antecedent to thought. This experiential knowledge was the object of inquiry and the

¹⁷⁹ Ruiz de Alarcón, 131.
¹⁸⁰ Ruiz de Alarcón, 43.
trope of legitimacy for Spaniards like Hernández, and Amerindians like Juan Badiano and Martín de la Cruz.

This naturalistic understanding of experience inspired the disenchantment of nature. If experience is unclouded by Satan, then neither Lucifer nor God can be immanently present in nature. To put it another way, there was no little demon hiding in the seed of ololiuhqui. And therefore, the experiential knowledge of the drug might be valid, although the sense made of this experience was full of heretical error.

This understanding kept open the doors to a limited level of integration and syncretism between European and Amerindian medical cultures, and historians know well that such syncretism persisted (unevenly and haltingly) throughout the colonial period. But at the level of colonial policy, in the 17th century the colonial state focused its public health energies towards enforcing medical orthodoxy and the racial purity of the medical professions. And regarding systematic knowledge production, native knowledge was by this time so devalued as to not be knowledge at all, but rather, mere naturalistic sense perception buried beneath a mountain of superstition. They were not even effective Satanists anymore, Ruíz de Alarcón argued: while the “Devil taught their ancestors” powerful curses, protestations, and invocations, by the 17th century this had subsided into an “implicit pact with the Devil,” providing now only outdated superstitions.

182 Ruíz de Alarcón, Treatise on the Heathen Superstitions That Today Live among the Indians Native to This New Spain, 1629, 73.
Chapter 2: Zealots and the Building of a Medical Empire

ZEAL…

…the affective and vigilant attention to the glory of God…

…the appetite to [re]generation in irrational creatures: and in this sense it is said that they are, or go, in zeal…

“Zeal,” Diccionario de la lengua Española, 1739

In the 17th century, the royal and official interest in medical syncretism that we saw in chapter 1 became lost to new imperial prerogatives. And, as we will see in chapters 3, 4, and 5, it was not until the mid-18th century that these initiatives were rekindled and repackaged for new exigencies. In the meantime, myriad forms of syncretism and fusion proceeded depending on local circumstances: among missionaries on the frontier, between Spanish women and their parteras (midwives), between village priests and their parishioners, between pharmacists and their suppliers, and so on. But, as far as imperial ends were concerned, medicine had a different mandate in New Spain. The enfeebled Tribunal of the Protomedicato ensured orthodoxy and the racial purity of practitioners, but this affected only a small minority of the population. The much more important role for imperial medicine, and in particular institutions of public health, was as a tool of missionary expansion into uncharted, or newly charted, territories and insufficiently acculturated villages and communities (in Spanish eyes, that is).
In this chapter, I will sketch the institutional contours and ideological foundation of Hapsburg public health, as this will be essential to understanding the transformations of the 18th century. Hospitals, mostly operated by religious holy orders, led the expansion of the frontier, serving as headquarters, sanctuary, and seminary for missionaries and their new converts. These orders enjoyed a monopoly on institutionalized public health, which in contemporary terms was justified and motivated by their superior zeal. In theory, but also in practice, this sense of zeal drove the friars to erect hospitals and inspired the work therein. Concomitantly, the holy orders and their hospitals were acknowledged as the legitimate stewards of public health. Their charismatic zeal would later become coveted and coopted by professional physicians and surgeons as they struggled to overcome public distrust and resentment to win the authority over population health, as we will see in chapter 4.

It has long been assumed in Spanish colonial historiography that before the modernizing ambitions of the Bourbon reforms in the second half of the 18th century, public health was of little concern to the king, the Council of the Indies, the viceroy, and on down the chains of command. In what is by far the most thorough, authoritative, and widely-regarded work on the subject, John Tate Lanning writes that excepting times of periodic epidemics, when the viceroy would garner the resources for “the machinery of public health as Americans understand it [came] into play,” there was nothing like a modern sense of public health. The Royal Tribunal of the Protomedicato, which was the

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183 Hapsburg refers to the House of Hapsburg, which held the Spanish throne from Emperor Charles V (1516) to King Charles II (1700).
foremost medical authority of the land, had no mandate for broad measures of population health, but instead served almost solely as a certification institution.\textsuperscript{184}

Seeking to correct old Black Legend assumptions that Latin America knew no modernity until the late 19th century Liberal reforms, more recently historians have looked to the institutions created through the Bourbon reforms. The Hospital of San Andrés and the Orphan Hospital, both founded in the 1770s, sought to use and develop the most modern sciences to forge a stronger empire through a healthier population. Silvia Arrom, in her study of the birth and development of Mexico City’s Poor House, concludes that the “true watershed occurred in the late eighteenth century,” as imperial reformers sought extended measurements of population management, urban planning, and social welfare.\textsuperscript{185} However, the assumption that public health should be measured by its current forms—a professional class directed by state mandate to enact social programs—has obscured the actual role of medicine in the colonial project. By far and away, the institutions with the widest reach and mandate for protecting the health of the colony were the regular Catholic orders, especially the Franciscans, the Jesuits, the Order of Saint Hippolyte, the Order of San Juan de Dios, and the Order of Our Lady of Bethlehem. These organizations traveled to the furthest frontiers of empire, building hospitals in their wake under the (often tragically mistaken) mission of co-fostering the corporeal and spiritual health of the Indian and preserving the strength of the agents of imperial

\textsuperscript{184} Lanning, The Royal Protomedicato, 11.

\textsuperscript{185} Silvia Marina Arrom, Containing the Poor: The Mexico City Poor House, 1774-1871 (Duke University Press, 2000), 73. On public health during the Bourbon reforms, also see Martha Few, For All of Humanity: Mesoamerican and Colonial Medicine in Enlightenment Guatemala (University of Arizona Press, 2015); Alba Morales Cosme, El Hospital General de San Andrés: la modernización de la medicina Novohispana 1770-1833 (México: UAM Xochimilco, 2002).
expansion. Taking these into account, it is clear that the secular planners, physicians, and intellectuals with modernizing ambitions in the late 18th century were entering a crowded field. They spoke the language of enlightened rationality, but attaining a piece of the public health pie meant reworking concepts of charity, piety, and zeal. As we will see in chapter 3, this would have broad implications for the developing fetish for Indian medicines in the late 18th century.

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**Baroque Public Health**

The management of health, especially public health, was far more critical to colonial expansion than scholars have acknowledged. The quarantine strictures of port cities, role of physicians on vessels, and (most importantly) the devastation of crowd epidemics is all well known. Here I highlight another facet: the central place of hospitals to territorial expansion into frontier territories. In New Spain, where imaginaries of dominion soon met the realities of plentiful social, political, and environmental diversity, of wayward conquistadors and dispirited proselytizers, of unsanctioned miscegenation, rampant plagues, and myriad forms of profiteering that easily trumped loyalty – here, healthcare, and the institution of the hospital in particular, was essential.

Hospitals served as controlled spaces and totalizing institutions in a land saturated with heathenism. With four strong stone walls protecting the compound, the hospital was a space of sovereign Christianity that could be sited deep within uncharted lands, providing missionaries and converts a headquarters and refuge. This was a precedent set early by the religious orders. Regarding the first Franciscans who arrived in 1524, the so-
called Twelve Apostles of New Spain, an official manuscript record from the 1570s documenting their achievements describes that, “As soon as the first Franciscan friars arrived in New Spain they began to build their monasteries, [and] in all of the pueblos where they built them, they immediately sought authorization to build a hospital where they could gather and cure the poor sufferers in accordance to Christian practice [in order] to teach the Indians through this the exercise of charity and works of mercy that they could practice with their neighbors.”

The monastery was the protected, sacred bastion surrounded with ramparts where the missionary could gather his energy and zeal for the challenges of the wilderness; next to this, the hospital was the space of evangelism and, so they hoped, cultural hegemony.

Hospitals proliferated, and eyeing their utility Emperor Charles V mandated one built in every Indian village. The theory of hospital building in the early decades of the colonial period is best exemplified by Vasco de Quiroga, Bishop of Michoacán from 1538 to 1565. From his headquarters in Patzcuaro, Vasco de Quiroga oversaw the building of dozens of hospitals west of Mexico City to the Pacific Ocean. These, like other early colonial mission hospitals building off of Medieval tradition, were not specialized medical facilities but rather honored a more general definition of hospitality. They did indeed provide medical services to native populations and local Spaniards, some becoming famous destination hospitals, but their mandate also included spiritual


\[187\] Antonio de Herrera Tordesillas, Description de las Indias Occidentales; Historia general de los hechos de los Castellanos en las Islas i tierra firme del mar oceano, vol. 1 (Madrid: Imprenta real, 1730), 69.
education, cultural education, missionary training, and social programming. Hospitals served as a controlled meeting ground between populations, and, in the eyes of the imperialists at least, were intended to demonstrate the ultimately benevolent intent of the sovereign in expanding his empire. Like twentieth-century social reformers, the early colonial hospitals took a holistic approach to their charges. In a plea from 1565 to King Phillip II for royal patronage, Vasco de Quiroga explained that his hospitals supported “not only Christian spiritual policia, but also temporal, moral, and exterior policia (behavior, composure), human as it is called, for which there is so much need.”

Quiroga’s hospitals were the quintessential site of colonialism, a controlled space of experimentation and a microcosm and example of their ideal for colonial society.

In hindsight, our modern proclivity to de-historicize with a cynical gaze tempts a crass interpretation that Vasco de Quiroga and his ilk merely served up medical care like a Sunday hog roast to coax novices into the chapel’s gate. In the 16th century, however, the distinctions between the mind, body, spirit, and nature did not support such instrumentalism. Instead, the humoral theory of the body (as detailed in chapter 1) explained illness through a confluence of social, somatic, and spiritual factors. Tabardete (also called tabardillo and commonly now thought to refer to typhus), a “cruel disease which decimates the people of this Mexican providence,” for instance, was understood as a moist illness that festered around Mexico City because bad air arose from the lakes and were trapped by the mountains. This, however, was not a sufficient condition for


falling ill. Rather, environmental conditions reacted with body’s complexion, and the Indians, who were believed to be (like women) overly phlegmatic (having excessive phlegm) were likewise thought to be too moist. A moist environment pushed a moist body beyond equilibrium, and the consequence was particularly lethal.190 Excepting a few intellectuals, this bodily complexion was understood as a product of culture: diet, dress, childrearing techniques, gender relations, housing, social hierarchies, ritual, religion were all understood to have a dialectical relation to the body’s complexion and thereby health.191 The Indians of the Americas, having lived for so many centuries under the sole sovereignty of Satan, had amassed a surplus of erroneous culture and heritage, so thought the missionaries (see Chapter 1). Amerindian sickliness at the hands of plague, *viruela*, and other epidemic diseases, therefore, required a holistic approach to the mind, body, culture, and soul.

Although a minor player, the imperial state became involved in medical care for native populations with the founding of the Royal Indian Hospital in Mexico City in 1563.192 Multiple prerogatives were involved. The first was containment. Concerned about the bad “exhalations” of the sick, Phillip II ordered the hospital constructed “where

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191 Cañizares-Esguerra, *Nature, Empire, and Nation*, chapter 4; Earle, *The Body of the Conquistador*. Key sources supporting this point include, Diego de Cisneros, *Sitio, naturaleza y propiedades de la ciudad de México: agua y vientos a que esta sujeta; y tiempos del año. Necessidad de su conocimiento para el ejercicio de la medicina su incertidumbre y dificultad sin el de la astrologia assi para la curacion como los prognasticos* (Mexico: Ioan Blasco de Alcaçar, 1618); Enrique Martínez, *Reportorio de los tiempos y historia natural desta Nueva España, compuesto por Henrico Martinez* (Mexico, 1606); Alonso López de Hinojosos, *Summa, y recopilacion de chirugia, con vn arte para sagrar muy vitil y prouechosa* (Mexico: Antonio Ricardo, 1578).

192 There is some uncertainty about the founding of the hospital due to the dearth of documents. Charles V mandated one be built in 1553, but there appears to have been no movement on this for a decade.
no harmful wind passing it will harm the rest of the population, preferably at a higher
elevation.” Instead the hospital was built near the site of the Jesuits’ compound, but at
least the infirm were quarantined. Again, though, to see imperial instrumentalism here
would be an ahistorical reading on our part. Phillip II’s father, Emperor Charles V
explained of such hospitals that “the sole purpose is Christian charity.” Phillip II
added “because there are many Indios here who, when they get sick, have nowhere to go
to be cured.” And therefore, “In accordance with [my royal mercy] and the service made
to Our Lord through it, I have found it well to approve the making of such hospital.”
This statement should not be taken too lightly. In the context of the late 16th century, as
conquest was becoming philosophically and legally unjustifiable, ideological reasons for
empire became increasingly based on the idea of benevolent paternalism. This
humanitarianism of the crown was not in the least bit secularized. Rather, it reflects the
wisdom of Phillip II’s famous and oft-published royal physician Jerónimo de Soriano:
“that which brings us closest to God is securing the health of man.” However feeble

193 Consejo Real de Indios, “Capítulo Ciento y veinte y seys de la prouision que se despachò para nueuos
descubrimientos y poblaciones, en treze de l Julio de sesenta y tres, en que manda se funden y hagan
hospitales quese curen los enfermos pobres ansi Indios, como Españoles, 1563,” in Cedulario Indiano, ed.
194 Carlos V, “De los hospitales y cofradías (Oct. 7, 1541),” in Historia de un hospital: el Hospital real de
195 Carlos V, “Cedula que manda a la Audencia de la nueue España dè orden como se haga y funde en la
cuidad de Mexico un hospital para curar pobres enfermos, y para su edificio y sustento, se de cierta
cantidad de la Real hazienda, 1553,” in Cedulario Indiano, ed. Diego de Encinas, vol. 1, 4 vols. (Madrid:
Ediciones Cultura Hispanica, 1945), 219.
196 Gerónimo Soriano, Libro de experimentos medicos, faciles, y verdaderos (Madrid: Luis Sánchez, 1599),
7r.
the Royal Indian Hospital was to become in the next century, it was created with otherworldly intentions.\textsuperscript{197}

Similar intentions inspired the extension of religious hospitals into Indian villages and settlements across New Spain. So critical was this to the process of colonization and evangelism that the 16th century gave birth to three new regular religious orders dedicated solely to the building of hospitals. The \textit{Orden de San Hipólito} (the Hippolytes), the \textit{Orden de San Juan de Dios}, and the \textit{Orden de los Hermanos de Nuestra Señora de Bethlehem} spread across north and central America building hospitals in fierce competition with one another for jurisdiction over the souls and bodies of Indians. The first hospital of the Hippolytes was founded in 1566 by Bernardino Álvarez, a colorful character in the early empire, who tried his hand at soldiering, card-sharking, jail-breaking, and life on the lam before making a fortune in commerce, only then to dedicate his riches to mercy after a life-altering brush with death. The edification of his zeal and charity in one hospital sparked dreams of a medical empire, and by the time of his death in 1584 Álvarez had built five more, in Guastepec, Veracruz, Xalapa, Perote, and Puebla, the latter four being quite advantageous to the empire because they provided medical care along the mule-train route between the capital and the gulf. His would be a legacy of service to the Lord, and therefore, his last will to his followers – who had grown into a

\textsuperscript{197} Much more on this in the following chapter.
quasi- but not a fully confirmed monastic order\footnote{Until the early 18th century they were technically under the mandate of the Augustinians. More on this below and in chapter 3.} – was for them to fan across the realm, building hospitals in deserts, rainforests, and mountains.\footnote{Cheryl Martin, “The San Hipólito Hospitals of Colonial Mexico, 1566-1702” (Diss., Tulane University, 1976), 1–44.}

Maps one though eight (below) illustrate quite clearly the geographic patterns of hospital expansionism. The first, the \textit{Hospital de Jesús}, was established by Hernán Cortés in 1524 and by the end of the 16\textsuperscript{th} century hospitals had rapidly extended throughout central New Spain (maps 1, 2, 3 and 4). In the seventeenth century this pace slowed down (maps 5 and 6), as did frontier expansion generally, until the reconquest of New Mexico after the Pueblo uprising (1680). Missions in Texas, Florida, and Baja California blossomed in the early 18\textsuperscript{th} century, and extended into Alta California and Louisiana (after the Seven Years War) by the end of colonial rule (maps 7 and 8). As can be seen in Chart 3 below, the independence of continental Latin America in the early 19\textsuperscript{th} century did not slow the pace of imperial hospital development; rather, now limited to Spain’s possessions in the Caribbean and the Philippines, their importance to securing colonial society seems to have increased. Charts 1 through 4 below also illuminate the centrality of this institution in the first decades of the colonial period. This appears to have been unique to New Spain: in Charts 3 and 4 we see that more hospitals were built in this viceroyalty than all other colonies combined.\footnote{These maps and charts are my own creations; data for them was assembled from F. Guerra, \textit{El hospital en hispanoamérica y filipinas 1492-1898} (Madrid: Ministerio de Sanidad y Consumo, 1994).}
Map 1: Hospitals Built by 1550

Map 2: Hospitals Built by 1550
Map 3: Hospitals Built by 1600

Map 4: Hospitals Built by 1600
Map 5: Hospitals Built by 1650

Map 6: Hospitals Built by 1700
Map 7: Hospitals Built by 1750

Map 8: Hospitals Built by 1821
Graph 1

Hospitals Built in Spanish Colonies
1492 to 1895

Graph 2

Hospitals Built in New Spain and Northern Frontier Areas, 1520 to 1821
Graph 3

Hospitals Built per Year in Spanish Colonies (Except New Spanish Jurisdictions), 1492-1894
Finally, in chart 4 we note the conspicuous cessation of hospital building in New Spain during the 17th century. This corresponds quite precisely with periods of colonial expansion, the earlier phase (as seen on maps 1-4) limited to central Mexico and the latter to frontier expansion in New Mexico, California, and Texas (maps 6, 7, and 8). Further, demographic statistics demonstrate that the Spanish (both Creole and peninsular) population remained relatively static and even declined in the 18th century (figure 6). This underscores that the growth of hospitals does not reflect the Europeanization of the population; rather, these institutions served strategic imperial objectives and mediated between Spanish and non-Spanish populations.

* * *

ZEALOTS

The extension of hospitals into the furthest reaches of empire served Spain well, but the motivation behind the program was not especially instrumental. Rather, for the missionaries of Holy Brotherhods who operated most of these institutions were focused on matters both more personal and more cosmic. The proper measure of their motivations, their intentions and expectations, and how they faced daunting challenges was instead zeal. Zelo (also celo, and occasionally selo in colonial documents) was the affective sensation of being aligned with God’s intentions. But it also was a currency, traded, invested, and spent. It proved the righteousness of kings, but gone wrong it was the very essence of human depravity. Zeal was, in short, a nearly ubiquitous concern up and down the hierarchies of the Spanish empire.

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The central purpose of colonial hospitals was not the preservation of health so much as the effective realization of zeal in a holy project. Hospitals were idealized institutions, imagined to enact Christianity for the populations they served through the “burning, fervent, and holy zeal” of the brothers.202 The handbook of the Bethlehemites explained their Christian identity thusly: “Why, among all possible places, did our Lord Jesus choose Bethlehem for his Birth? It is said, ‘He was Born in Bethlehem to cure our ailments, and to form there the first Hospital, to ease our labors, instituting and establishing a new Order, or a Religion newly Founded, the Institute [foundation] of which is Convalescence.’”203 The brothers of the order were not merely spreading the good word or even extending the reach of the “universal church”; they were, instead, actualizing Christianity – or so went the poetics of public health in the Hapsburg era.

One cannot overstate the omnipresence of this notion in colonial thought, especially that of the regular religious orders. The brotherhoods were “united through Holy zeal” to undertake their missions; manuals for initiates sought to impart zeal, and explained how teachers were supposed to foster, hone and direct the zeal of their charges204; missionaries possessed the “desire for the most efficacious efforts, zeal, constancy, and perfection in their works”205; and they were advised to maintain “cautious

202 Orden de San Hypólito, Constituciones del Sagrado Orden de Charidad, de San Hypólito Martyr (Mexico: Francisco Rivera Calderon, 1718), 84.
203 Francisco de San Buenaventura, Instrucción para novicios de la Religión Bethlemítica (México: José Bernardo de Hogal, 1734), frontmatter.
204 Orden de San Hypólito, Constituciones del Sagrado Orden de Charidad, de San Hypólito Martyr, frontmatter.
205 Orden Bethlehemítica, Regla y Constituciones de la Sagrada Religion Bethlehemítica, fundada en las Indias Occidentales (Mexico: José Bernardo de Hogal, 1751), 2.
zeal for their own spiritual improvement.”206 Treatises on public health were drafted out of “zeal for health”;207 even the king himself endowed hospitals as a manifestation of his zeal for the “augmentation of his subjects”; and candidates for sainthood (based on miraculous healing) were validated by the measure of their zeal.208 Seldom did a court testimony not mention the zeal with which a colonial officer executed his duties. The ubiquity of this term, and the length of printed matter wrangling its implications and imparting it to followers, demonstrates its overwhelming importance in the empire.

Tracing the history of emotions, one cannot assume that such terms, especially one bandied about as zeal was, effectively reflected the interior experience of contemporaries. Rather, in this context, zeal constituted what Peter and Carol Stearns call an “emotionology.”209 That is, zeal was an emotional expectation which colonial subjects used to attempt to describe their experience, and to which they aspired as they judged their own mental states. The thousands of supplications to the king and viceroy signed “with diligence and zeal” evidence how rote the term could be, but there was also

206 San Buenaventura, Instrucción para novicios de la Religión Bethlemitica, 54.
207 Juan Bautista Juanini, Discurso phisico, y politico, que demuestra los movimientos que produce la fermentacion, y materias nitrosas en los cuerpos sublunares y las causas que perturban las benignas, y saludables influencias del ambiente desta villa de Madrid, de que resultan las frequentes muertes repenties, breves, y agudas enfermedades, que se han declarado en esta corte de cinquenta annos a En la segunda parte se pone un metodo preservativo de los malos vapores, y exalaciones, que ocasionan las inmundas humedades de las calles desta villa, y los efectos que causan: Ponense algunos (Madrid: En la Imprenta Real, por Mateo de Llanos y Guzman, 1689), 1v.
208 Losa, La vida que hizo el siervo de Dios Gregorio Lopez, 1618, 40. For another significant example from New Spain, see Carlos Sigüenza y Góngora, Parayso Occidental: plantado y cultivado por la liberal benefica mano de los muy catholicos y poderosos reyes de España nuestros señores en su magnifico Real Convento de Jesus Maria de México (México: Juan de Ribera, 1684), 74. The potential examples for this point are limitless.
no shortage of petitions for royal patronage that strove to demonstrate the selfless zeal of the petitioner for the empire’s global destiny. For courtiers and religious brothers alike, zeal was an idealized emotional state – a complete submission of the self to the collective.

Zeal denoted a type of impassioned enthusiasm, and in that it was a sort of abandonment of the self to faith. Brothers of the order were trained to constantly monitor their own inner states for proper zeal; laziness and any vice was chastised as evidencing insufficient zeal. Zeal served as a collective enthusiasm that members attempted to fulfill. But, more than just the 17th century version of cool, zeal also referenced holiness. Ultimately, it signified, as the royal dictionary of 1739 defined it, “the affective and vigilant attention to the glory of God.” But this was not just a personal relationship with God; zeal was expected to be an effective force in the world. Saint Augustine articulated this clearly: “and Thou [God] didst collect the society of unbelievers into one conspiracy, in order that the zeal of faithful might appear, and that they might bring forth works of mercy unto Thee, even distributing unto the poor earthly riches, to obtain heavenly.” Zeal was a kind of spiritual collective agency.

But it was also a social currency. Novices were understood to be of unstable zeal, who, through self-discipline and the guiding zeal of their superiors, would train the mind’s

210 “Thus I have served Your Catholic Majesty with pure zeal and good intent, offer all I possess, and I cannot understand what reason there is to believe that I have held back anything which belongs to Your Highness,” wrote Hernán Cortés in his fifth letter to Charles V. Hernán Cortés and Anthony Pagden, Letters from Mexico (Yale University Press, 2001), 441.

211 Real Academia Española, Diccionario de la lengua castellana: en que se explica el verdadero sentido de las voces ..., vol. 6 (Madrid: Real Academia Española, por los herederos de Francisco del Hierro, 1739), 566.

212 Saint Augustine (Bishop of Hippo.), The Confessions (Edinburgh: T. &T. Clark, 1876), 392.
power over this passion. The accumulating zeal matched the pupil’s place in the order’s hierarchy, mounting until sufficient for mission work. A trickle-down theory of emotional discipline and discharge was at play: God’s grace refracts through the zeal of the king and Pope, from which it continues to disperse down the line through the good work of evangelism and charity and the building of the Christian empire. Looking up from the base of this hierarchy, one advanced (in theory) by disciplining and cultivating zeal within. This was vital, because zeal, like all passions, was understood to be originally worldly and hence base. Its other significant meaning, again most clear in the 1739 dictionary, was “the appetite to [re]generation in irrational creatures: and in this sense it is said that they are, or go, in zeal.”

Within the emotionology of zeal, “barbarian” Indians beyond the frontier did not lack zeal, but rather failed to cultivate it and left it directed towards uncouth sexual practices. In the Spanish imperial imagination, disciplined zeal was the emotional marker of Christian civilization.

And thus it was the torch of the missionary. The great Jesuit mission-builder and frontier-blazer Eusebio Francisco Kino, who was the first to explore and map Sonora and southern Arizona, copiously discussed zeal in his memoirs. The missionary’s duty was to carry out the Catholic zeal of the king and his measure was the ability to reflect this zeal. Wrote Kino: “With [the king’s] royal provision and royal cédula, which by its admirable Catholic zeal might well and should astonish and edify the whole world, I came in

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214 It is a matter for another work, but I suspect that zeal gained its political and social salience through chivalrous culture of the Reconquest of Iberia in the 15th century, thereafter becoming attached to the work of empire much in the same way that late Medieval notions of inheritance and blood purity were reworked into the colonial caste system. On the latter, see Martínez, *Genealogical Fictions*. 
February of 1687 to these missions of Sonora... [Here] I found in his Reverence [Father Manuel Gonzales] such charity and so holy a zeal for the welfare of souls,” that the worthiness of the endeavor was evident. Successful evangelism was “effected by zeal” and demonstrated one’s zeal; witness to an uprising of natives, on the other hand, could be an injury to one’s zeal; and obstinate Indians could require added zeal. Zeal could also be a stymied potential, should the zealous young missionary not gain a proper placement to effect it.\footnote{Interestingly, zeal also had a mandate of modesty about it. One did not exclaim or celebrate one’s own zeal; rather, one could only comment on others’ strength or weakness of zeal. One could demonstrate zeal and through recounting achievements evidence zeal, but it was up to the observer to judge whether Catholic zeal was truly manifest. Kino’s writings and letters show that one acceptable strategy of claiming zeal was to commend the zeal of one’s close associates. Eusebio Francisco Kino, \textit{Kino’s Historical Memoir of Pimeria Alta; a Contemporary Account of the Beginnings of California, Sonora, and Arizona}, trans. Herbert Eugene Bolton, vol. 1 (Berkeley: University of California Press, 1919), 86, 92, 132, 150, 356.}

Zeal was also an emotional appeal with political consequences. Among Bartolomé de las Casas’s personal attacks on Juan de Sepúlveda in their famous debate of 1553 was that Sepúlveda only feigned a “false zeal for royal service.”\footnote{Bartolomé de las Casas, \textit{Las Obras del obispo D. Fray Bartolome de las Casas, o Casas ...} (Seville: Antonio Lacuallaria, 1646), 110.} Feigning humanitarian concern for the Indian, the conquistador and chronicler Bernal Díaz de Castillo bemoaned the many conquerors who “lacked the zeal that they are obliged have for service to God and to Your Majesty,” and who from this depravity enslaved the Indians.\footnote{Castillo, \textit{Historia verdadera de la conquista de la Nueva España}, 835.} At the end of the 16th century, the Jesuit José de Acosta excused the first conquistadors, as well as their apologists, for having executed their duties “with honest
zeal, although too much,” but then excoriated subsequent settlers for their “wicked zeal” to obliterate all memory of native culture.\textsuperscript{218}

By the 17th century, Spanish thinkers cared less about justifying the Conquest and instead aimed to justify the empire as a \textit{fait accompli}. The preeminent jurist Juan de Solózano Pereira, whose \textit{Politica Indiana} was the most influential political treatise of the age, accepted that the empire was born of compromised circumstances (to say the least) but argued that the empire was now legitimate because of its capacity for improvement – that is, to forge a Christian civilization.\textsuperscript{219} Critical to his argument was that the crown was the only worldly power that could protect the Indians from the ravages of European settlers (Spanish or otherwise) and guide them into virtuous Christian lifestyles. This was effected through the king’s superior zeal, which is a prime political “virtue that encapsulates (encierra) Piety and Justice.”\textsuperscript{220} The king “exerts his zeal [for the protection and conversion of the Indians] through Instructions and diverse orders to his viceroys.”\textsuperscript{221} As the king’s avatars in the New World, the viceroy was responsible for extending this royal zeal throughout the colony.

Zeal as an axis of political philosophy gained its most explicit treatment in a 1746 treatise by the Catalan Jesuit thinker Antonio Codorniú. In his defense of the monarchy against republican ideas, \textit{Índice de Filosofía moral cristiano-política}, Codorniú argued that zeal, and its close cousin charity, were the glue that held a society together.

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\textsuperscript{218} Acosta, \textit{Historia natural y moral de las Indias}, 395, 528.
\textsuperscript{220} Juan de Solórzano Pereira, \textit{Politica indiana}, vol. 1 (Madrid: por Matheo Sacristan, 1736), frontmatter.
\textsuperscript{221} Solórzano Pereira, 1:76.
\end{flushright}
Codorniu explained that the “love of his vassals” is the “most secure throne of the Prince” and that this love was maintained by the “reign of Christian Charity” emanating from on high. Zeal, meanwhile, was the vehicle for this love, the “executor of its ideas.” As Codorniu succinctly put it: “Love desires, and Zeal carries out.” There is no mistaking that both charity and zeal descend from God: “God... essentially is Charity – when [God/Charity] appears dressed, Zeal is his regalia; and when armed, Zeal is his weapon.” Codorniu’s argument was that zeal is only functional in its “pure” state and that this purity is both ensured through disinterest and ensures disinterest. The “essence” of purified zeal is to hold “God... Kingdom, Republic, Community, or Family” as one’s primary object. Should zeal become sullied with self-regard, though, it turns “covetous, pernicious, and villainous.” The good prince, hence, receives the charity and zeal emanating from heaven, and then adroitly disperses it through his subjects to forge a united community of disinterested love.222

There is nothing new about a political regime having affective referents. Norbert Elias influentially proposed that the development of larger and larger social hierarchies in the *longue durée* of Western civilization effected the gradual disciplining of animalistic passions into the restrained forms of courtly culture. Warriors accustomed to brutality and rape were, he suggested, over dozens of generations strapped into fancy tights, forced to eat with a fork, made to bathe, and damned to the expectations of chivalry. According to Elias by the late middle ages the burgeoning hierarchies of European monarchies and empires gave rise to a formidable social superego that tamped and guided the base urges

222 Antonio Codorniu, *Indice de la filosofia moral christiano-politica: dirigido a los nobles de nacimiento y espiritu ...* (Gerona: Antonio Oliva, 1753), 343, 351–59. First printing was in 1746.
of the id into impulses trained to structural diversity and specialized functions.\textsuperscript{223} Elias’s assumptions about progress and his vast generalizations have earned him a due amount of criticism. What he correctly brought to our attention though is the functional role of emotional regulation for state structures. In this regard, zeal is particularly interesting because it explicitly sought to redirect sexual impulses towards imperial ends. With dreary pessimism Sigmund Freud asked, is it possible that “some civilizations, or some epochs of civilization [with outsized superegos]... have become ‘neurotic’?”\textsuperscript{224} Had he investigated the colonial Holy Orders, he likely would have diagnosed them with neurotic hysteria.\textsuperscript{225}

Max Weber, however, might be our better guide. What Freud termed a neurosis Weber described as an “iron cage” (or “steel-hard casing” in Stephen Kalberg’s less flashy translation), and this gets a little closer to zeal. Weber defined the bourgeois culture of 19th century capitalism as dominated by the affective coordinates of the “calling,” which “rationalized” and systematized human initiative towards the virtuous accumulation of capital. This irrational affective trap was, in Weber’s telling, the cardinal compulsion of the “spirit” of the age.\textsuperscript{226} Zeal, I suggest, similarly set the “spirit” of Spanish colonialism into action, at least in theory. Like the calling, it was the emotive ideal at the center of the imperial “emotionology” and the one that was supposed to set


\textsuperscript{225} This signifying other-directedness, or supplanting one’s own desires with those of another.

men in motion. Avarice, asceticism, empathy, fear, anger and so on were all expected as
given traits and impulses of men, but zeal was the one that could be mobilized into
running the empire.227

* * *

There is much more to be written about the feeling of zeal; as a keystone affect of
the Hapsburg empire, it was nearly omnipresent and its uses, abuses, regulation, and
experience require more scholarly attention. For now, however, it is enough to recognize
that zeal had a charismatic appeal within the empire: it was an aspiration, the emotive
mark of holiness and faith, and an emotional structure that gave impulse to a host of
imperial actions. In particular, for the regular religious orders that took upon themselves
the care of the health of the Indians and which pushed the edges of empire founding
hospitals on the frontier, zeal was the measure of self-discipline and the glue of their
collective enterprise.

As I have established above, contrary to most all historiography and standard
narratives of science and modernization, public health was an integral and deeply
political element of the Hapsburg Spanish empire. This was almost entirely in the hands
of the regular religious orders, and especially the three hospital-building orders, the

227 In this regard, it is also similar to the ideological function of the idea of interest in the early modern
capitalism. Albert O. Hirschman writes that central to the formation of capitalist modernity in northern
Europe was the arbitrary distinction made between passions and interests. The former continued to be
maligned in the face of reason and rationality, as they had been for centuries, but interests were valued
because of their constancy. Greed, as opposed to lust, is never satisfied, and therefore can be depended
upon for the ends of statecraft. While unbridled passions still led to punishment, loosed interests served
social functions and did not ruin the individual’s capacity for reason. It could be counted on as a motive
force that could be guided and harnessed for social ends. Albert O. Hirschman, The Passions and the
Hippolytes, the Bethlehemites, and the Order of San Juan de Dios. These spread across vast realms and delved deep into the frontiers to bring worldly and otherworldly salvation to Indios and “bárbaros.” Zeal was their currency, and the basis of their authority.

With this established, in chapter 3 we now can turn to the 18th century when the professional class of university-trained physicians and their Creole intellectual peers sought to garner for themselves the moral authority as the Indians’ caretakers. The utopianism and optimism about human mastery that pervaded the enlightenment sparked the enthusiasm of Creole intellectuals as well. However, within the colonial context, extending control over public health and claiming stewardship of the Indians had to be made within the affective lexicon of zeal and charity. This is most concretely visible in the struggle between the Hippolyte order and secular doctors for control of the Royal Indian Hospital in Mexico City. Through this, we will see that this changing discourse of zeal would also come to color the developing economy for “Indian medicine” in the 18th-century colony.
Chapter 3: Steamy Bodies at the Royal Indian Hospital

One who puts his eyes on a woman and enjoys the view should not presume that no one else sees him...

Constituciones de la sagrada religión de la charidad, 1749

The zealous pursuit of public health we examined in chapter 2 persisted through the 18th century, although its meaning was challenged and changed. In this chapter, I follow the transformation of the Royal Indian Hospital in Mexico City from a forgotten backwater of the Hapsburg policies of public health to a cornerstone of that of Charles III during the Bourbon reforms. The example of the Indian hospital usefully illustrates how notions of indigeneity, technology, and power shifted the ideology of imperial public health.

In the pages below we will trace the reinvention of the Indian Hospital from 1762 to 1770 under the leadership of Antonio de Arroyo. Two innovations of his merit special attention: the establishment within the hospital of New Spain’s first anatomy theater, and the installation of a temascal within the hospital’s walls. Putting these in the contexts of the institutional crises that beset the hospital throughout the 18th century as well as the

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228 Order of St. Hippolytus and Bernardino Alvarez, eds., Constituciones de la sagrada religion de la charidad, de S. Hipolyto martyr. Fundada en las Indias occidentales por el venerable padre Bernardino Alvarez. Confirmada por N.SS. P. Innocencio XII (Mexico: Maria de Ribera, 1749), 5.
changing market for medicine within the colonial capital, we see emerging new interpretations of the responsibilities of state, the obligations of vassals, and the duties of professionals. In the late Hapsburg era and early in the 18th century, the Indian was the object of the king’s mercy and zeal, which not only legitimated empire on Christian grounds but also organized public health largely through the regular religious orders. But by the 1760s, this ideological Indian was transforming into a specimen for experimentation, an implement for the conquest of disease, and a ward of the state. No longer would the hospital offer mere succor; now it would cure. No longer did the empire seek to penetrate the Indian’s soul, but rather, it aimed its needles at the recesses of his body and the mysteries of her medicine.

To tell this story, we must back up a bit. In the first section, I treat the vitriolic conflicts between the secular administrators of the Royal Indian Hospital and the Order of Saint Hippolytus (*Sagrada religión de la charidad de San Hipólito Martyr*, referred to here as the Hippolytes), which was granted control of the hospital in 1701, and for fifty years was the bane of many doctors’ lives. This story is significant for illustrating what it meant for the secular administrators and professional doctors to gain control over the bodies of sick Indians at mid-century. Contrary to expectation, the religious order’s capacity to administer the medical attention to the sick was never in question, and it was not on technical ground that the professional class argued for or won control. Rather, the conflict hinged on which class of specialists had the proper and sufficient dedication and discipline — in the contemporary parlance, zeal — to administer ill Indians. In the subsequent section I place this conflict within the wider frame of the changing marketplace for medicine in the colony. The growth of publishing in New Spain helped
enable a burgeoning marketplace for patent medicines, miracle remedies, and medicines marketed as indigenous. Colonial medical policies separated the market sectors of curanderas and physicians, but the new marketplace for novel scrambled the boundaries between orthodox and informal medicine. By the century’s end, the colony’s most prominent doctors were in business themselves selling so-called Indian medicines. For this chapter, however, what is significant is that this demonstrates the social and market pressures on the physician class to take a vocal and public role in overseeing the health of the colony — that is, to manifest their “zeal for public health.” Finally, in the third section we witness the arrival of the temascal and the anatomy theater in the Royal Indian Hospital in 1762-1763. Especially the former was an under-celebrated event, however it marked a significant transformation for both the hospital and for the class of Creole intellectuals. The addition of the temascal was part of the conversion of the Indian hospital from neglected and antiquated Baroque institution into a center for research, teaching, public demonstrations, and activist efforts at combatting epidemics. The temascal, which was formerly a reviled and barely tolerated practice, now became integrated into the colonial state’s mechanisms of population management. But also, as I show below, the employment of indigenous specialists and their medicines in the hospital was nothing new. The novelty was the conscious and active attempt to employ them and advertise them; in the following decades this would become one of the primary interests of the physician and intellectual classes.
The Royal Indian Hospital in the 18th Century

To understand the changes and challenges facing the Indian Hospital in the 1760s, a little background is due. It is exceedingly difficult to paint anything like a full picture of the Royal Indian Hospital in the 17th century. Currently the documentary record before 1700 is woefully thin, which is likely the result of a fire that leveled the hospital in 1722. It is clear, however, that by the end of the 1600s the hospital was in a precipitous decline, with its physical plant crumbling and very few potential patients daring to enter its walls. King Philip V described it in 1701 as a “profound failure of charitable service.”\textsuperscript{229} The physicians coerced into weekly or biweekly visits easily found more lucrative emergencies demanding their immediate attention and even the director, or majordomo, of the hospital, appointed by the court of the Audiencia, seldom bothered to visit. It might be, however, that the patients preferred it that way. Documents from the middle of the 17th century indicate that at that time all the nurses were Indios and Indias; this would mean that with the exception of an occasional visit from a doctor or a priest, the hospital was entirely occupied by people of indigenous descent, staff included.\textsuperscript{230} While the officials neglected the building, used mostly as a site of quarantine, where the dying expired and were buried, it is likely that another economy of medicine was practiced within.

Beginning at the dawn of the eighteenth century, however, the hospital sprang into life as the symbolic center in the struggle between the mendicant religious orders and

\textsuperscript{229} “Real cédula en que a instancias de los religiosos de San Hipólito pasa a ellos la administración del Hospital Real” (April 8, 1701), 1r, Hospital Real de Naturales Vol. 101: Exp. 38, BNAH.

\textsuperscript{230} “Cuentas de cargo y data, Reales Ordenes, correspondencia y autos del Hospital Real de Naturales” (1639), 6v, IV Hospitales: 1141-004, AGN.
secular institutions over jurisdiction over the Indian body. The drama began in 1701, when, at the behest of Juan de Cabrera, the Hermano mayor of the Order of San Hipólito, convinced Philip V to place the Royal Indian Hospital under his order’s benevolent care. What ensued was a half century struggle over control of the hospital between secular doctors and administrators and the Hipolyte order.²³¹

The initial handoff was a measure to protect Spaniards from the unhealthy influence of sick Indian bodies. In his cédula of April 21, 1701, Philip V, then at the spry age of 18 and five months into his reign, explained that the problem was that the

²³¹ It is important to note that there was already structural conflict between physicians and religious institutions in the 17th century. For example, in the latter half of the 17th century the perennial dearth of court-approved physicians, and the high prices they could command from the racially cornered market led patients to reconstruct an ancient Christian institution, the cofradia, or lay brotherhood, into something like a modern HMO. No longer would it merely collect pennies from parishioners and shovel them out the door for parades to their patron saint. At the new cofradia, members paid a sign-on fee, and then made regular installments several times a year, and in exchange they received medical care from one or more doctors, surgeons, and pharmacists that the cofradia held on retainer by contract. Thereby, members could expect preferential medical attention, guaranteed access to scarce medicines, and knew that they would never have to resort to the chaotic market and its quacks, charlatans, and idolaters at times of need.

This was bad news for the physicians. Collectivization forced them to make contracts promising their services and precious medicines without charge to what became unmanageable rolls of dues-paying members. By 1686, they had enough, and together the city’s physicians boycotted the cofradías. This being a public health emergency, the fight swiftly rose to the top of the imperial government; the Audiencia, the foremost court of the land, had to rule on the legal and ethical boundaries between bodily and soulful healing -- and it sided with the market. “Ye who seeks to pay the vilest price, always gets debased (visioso) [services], because that which is good is incompatible with vile prices.” The Audiencia ruled the cofradía to be immoral for denying the doctors the honest rates of the market and “injurious to the public good” for harming the health of the king’s subjects. On the one hand, the steep membership dues denied access to “the poor, the habitually sick and the old,” and with the doctors tied up in retainer contracts, anyone not in the cofradía was not going to be able to get legitimate medical attention. But even those in the cofradia suffered, as there was no limit to enrollment, which burgeoned into the thousands, forcing the doctors to water down and adulterate medicines and make other similar “pernicious abuses against rights and conscience.” The cofradías directors were accused of running the whole thing as a money farm (grangería): “exorbitant embezzlement” “hidden under a veil of piety and collective utility.” In so many words, they argued that the market was fair, the market was moral, and the market was most effective at distributing services for the public good: “medicine is a free art.” And they did so almost a century before Adam Smith. Bartolomé Aranda Sidron, Informe en derecho, por la justicia que assiste á los medicos de esta ciudad en el pleyto, que les han movido los mayordomos, y mandatarios de las Hermandades (Mexico: publisher not identified, 1686), unpaginated.
Hippolytes’ primary institution, the Hospital of the Holy Spirit, was supposed to serve as a charity hospital for the city’s Spaniards; however, Indians had discovered that “if they avoid the [Indian Hospital] they die less, and [that] at the Charity Hospital of the Holy Spirit they get better attention.” So fewer and fewer were making it over to the much-neglected Indian hospital, to the point that the Hospital of the Holy Spirit was inundated, so it was said, despite its “insufficient capacity to maintain the Indians separate.” This was an issue of both health and faith. Regarding health, the king concurred with Cabrera that “this type of people must be kept separate from the Spaniards and mestizos, because of the nature of their ailments and their bad odor.” This conclusion would have been expected. According to contemporary understandings of the body, the humors of the Indian body, especially their surfeit of viscous, lethargic phlegm, could penetrate and afflict the bodies of Spaniards. Mixing with Negros too would have been a problem. For instance, decades earlier the overseer from the Audiencia defended the hospital’s no Negros policy on the grounds that their bodies were incompatible and therefore ailed differently and had to recover differently; “those Indios called Chinos” were okay though because they were of the “same naturaleza.” For the Indians, the issue concerned both the body and the soul. The whole point of the hospital was to “induc[e] them to the good faith, the very reason the Indios and Indias are admitted most of the time,” and therefore they needed a very different institution than Spaniards. To make matters worse, the Indians could not simply be sent back to the Indian Hospital, for their


233 “Cuentas de cargo y data, Reales Ordenes, correspondencia y autos del Hospital Real de Naturales,” 8v.
“fear [of the hospital is] enough to make them distrust medicine,” and with medicine, the faith. Therefore, Phillip V granted the Hippolytes control over both hospitals to isolate the infirm populations.234

It is not at all certain that unwanted, low-caste patients really were inundating the Hospital of the Holy Spirit. Indeed, it is quite likely that this was just a skillful maneuver by the Hippolytes, playing on racial fears for advancement. The Hippolyte order, since its founding, was something of the black sheep of the three hospital-building orders. Their competitors, the Bethlehemites, had been consecrated as a true and full Catholic order by the Pope in the mid-16th century, and the Order of San Juan de Dios had recently won this same recognition in 1676. The Hippolytes, however, were at the back of the race, and by the end of the 17th century they still were only a partially recognized, semi-order with limited privileges and under the bidding of the Augustinians.235 What is more, the order had had repeated run-ins with secular authorities that nearly destroyed them. In the 1640s, for example, the powerful and mercurial archbishop and viceroy Juan de Palafox y Mendoza argued that the Hippolytes had too much control over providing health services in some regions, and questioned their allegiance and utility to the crown and the veracity of their status as an order. Accusations and inquiries into their management and finances continued to plague the Hippolytes through the rest of the century, inspiring its leader, Juan de Cabrera, to depart for Madrid and Rome in 1698 to

234 Philip V, “El Rey a mi rey presidente y oydores de mi Audencia Real de la Cuidad de México en la Nueva España (April 21, 1701),” in Historia de un hospital: el Hospital Real de Naturales, ed. Antonio Zedillo Castillo (México: Instituto Mexicano Del Seguro Social, 1984), 141–42.

235 Such as collecting certain kinds of tithes, and being exempt from certain taxes and from the jurisdiction of secular courts.
bid for status equal to that of the Augustinians and the Bethlehemites. Pope Innocent XII approved this on May 20, 1700, but Cabrera still had to convince the king’s Council of the Indies for license to operate in the New World.\textsuperscript{236} It was in this context that Cabrera advised the king about the tragic intermingling going on at the Hospital of the Holy Spirit and offered his order’s services to remedy the issue.

From the crown’s perspective, this was part of a greater experiment in using the regular religious orders to execute, at a low price, the prerogatives of state. In addition to the Royal Indian Hospital, the Hippolytes were also given control of the royal hospitals in Querétaro, Veracruz, Jalapa, and Acapulco (none of these, it appears, was the site of such drama as the Royal Indian Hospital). Philip V was adamant that these institutions remained first and foremost exhibitions of the crown’s good Catholic zeal and charity -- that is, they were still part of the royal patronazgo.\textsuperscript{237} The Hippolyte Order, with its vows to poverty, chastity, and charity, were to supply cheap, dependable labor.\textsuperscript{238} As for the Hippolyte order, the king hoped that aligning and directing the acolytes towards “venerating the development and conservation [of the products of] the Catholic zeal of His Majesty” would resolve the “notorious scandals” that plagued the order. Specifically, novitiates were constantly joining and deserting on account of “the disordered abuse, the bad advice of some professors, and insufficient satisfaction from uprooting the common

\textsuperscript{236} Martin, “The San Hipólito Hospitals of Colonial Mexico, 1566-1702,” 220–60.

\textsuperscript{237} Throughout the 17th century the Spanish monarchs were likewise intent that while the religious orders ran the hospitals, they reported to the crown’s Real Patronazgo de Hospitales. Consejo de Indias, Auto proveído por los Señores del Consejo real de las Indias: sobre la forma en que han de tener los hermanos del Beato Iuan de Dios la administracion de los hospitales en las Indias (Madrid, 1632).

\textsuperscript{238} “Expediente sobre el plieto que sigue la Religion de la Caridad sobre administracion del hospital real, incluye cedula real y decreto sobre los votos de pobranza y castidad” (1701), 211v, Hospital Real de Naturales Vol. 74: Exp. 9, BNAH.
enemy of the religious life.” In the royal imagination the king’s disciplined and trained zeal would recapture these wayward youths and direct them towards “public utility.”

Immediately, Philip V backtracked on his original cédula at the prodding of the hospital’s administrator, Lorenzo de Saravia, and in 1702 split jurisdiction between the two. The religiosos held authority over the bodies of the sick and managed food, administering medicines, population management, and general rules and caretaking of the wards. The secular officers, who reported to the Audiencia, oversaw the budget and administrative details. As soon as the arrangement was made, however, the one accused the other of withholding resources and failing to provide for the needs of the institution, and the other accused the one of prodigal waste.

The squabbles between the secular administrators and the Hippolyte friars came to their first breaking point in 1711, when Francisco Valenzuela Venegas, the Judge Overseer (juez oidor) representing the Audiencia, came before viceroy Fernando de Alencastre Noroña y Silva, Duke of Linares (1711-1716), warning of catastrophe. He summed the situation up: “The Royal Indian Hospital, in its current state, is approaching ruin... which is due to the decision, made by the Royal Council, with good Catholic zeal, but without knowledge or science” to hand its operations to the Hippolytes. The problem was the friars’ profligate spending with little concern for budgetary constraints, resulting in the costs of operation far outpacing income. He specifically singled out the

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239 “Real cédula en que a instancias de los religiosos de San Hipólito pasa a ellos la administración del Hospital Real,” 4r.

240 David Howard, *The Royal Indian Hospital of Mexico City* (Arizona: Center for Latin American Studies, 1980), 11–12.

241 The income of the Royal Indian Hospital came from a number of sources. Foremost was a 1% tax on corn from all surrounding Indian communities; this was later monetarized in 1733 to one-half Real per
Hippolyte nurses in the men’s ward, who, despite their “vows and dedication to Divine Will” and poverty left a record of abuse, neglect, and wastefulness instead of “actualizing zeal,” as could be witnessed in the women’s ward. Now the physical plant of the hospital and its rental properties were in shambles and in a few scant years the whole operation would have to close without urgent action.

With approval from viceroy Linares, Valenzuela Venegas’s recommendations (known as the “New Plan”) limited the role of the friars and put the budget more strictly under the administrator’s control. He specified that the friars be limited to three and had them report directly to the majordomo. The judge overseer assured that a competent majordomo, chosen for the qualities of “integrity, good zeal, steadfastness and conscience,” would be able to wrangle them in. As for the budget, Valenzuela Venegas required more exacting bookkeeping to stymie the lies and misstatements used by the friars to inflate their budget needs. The budget measures appear to have been rather effective, but neither the relations with the Hippolyte friars nor the physical plant improved.

The latter met its demise first. That was in January of 1722, when a conflagration that began in the Coliseo (the theater from which the hospital derived funding) engulfed the entire edifice, “bringing to an end the pious ideal and charitable zeal.”\(^\text{242}\) The destruction was total, and the 30 remaining patients were evacuated to the Hippolytes’s community.

Second was the income from the Coliseo, a theater operated by the hospital and built in 1642. Also significant was the monopoly asiento for the printing of cartillas, which the Hospital farmed out to a local printing house. Finally, the hospital held numerous fields and rental properties which brought in a moderate amount of income.

\(^{242}\) “Informe del Oidor Juez conservador del Hospital de los Indios, de lo actuado en su comisión en cerca de 10 años” (fotos, 1732), 33r, Hospital Real de Naturales Vol. 76: Exp. 3, BNAH.
Hospital of the Holy Spirit, where they were “packed in like pigs, one on top of the other in the dirt, with rocks for pillows,” as would later be charged. In pious eyes, as the great Creole wordsmith Cayetano Cabrera y Quintero put it, the fire was “divine providence” and punishment for the “intolerable abuse, for creating a corral, worse than that for cows, from the patio and central cloister,” where lude comedies and strong drink were consumed. Through a fire like that of Jerusalem, “Heaven... purged and rid” the hospital of the undeserving so the truly ill could be treated.243

This fire, however, was unfortunately not the purifying kind. According to historian David Howard, there was no energy in the government, among the Hippolytes, or on the part of the majordomo to undertake the intimidating task of rebuilding.244 It was left to the judge overseer from the Audiencia, Juan Picado Pacheco245 to singlehandedly spearhead the institution’s rebirth. This was at least in part in response to “the constant clamor of the good Indians demanding the rebuilding of the hospital,” or so Picado Pacheco claimed. Three years and 40,000 pesos later, the hospital reopened, but whatever hope there was for a new beginning was immediately dashed. The ever-kindling flame broke out again on the third of June, 1726, the day that the newly

243 Cayetano Cabrera y Quintero, Escudo de armas de Mexico: celestial proteccion de esta nobilissima ciudad, de la Nueva-Espana, y de casi todo el Nuevo Mundo, Maria Santissima en su portentosa imagen del mexicano Guadalupe ... aparecida el ano de 1531 y jurada su principal patrona el passado de 1737 ... (Mexico: Viuda de D. Joseph Bernardo de Hogal, 1746), 399. The hospital administrator Juan Picado Pacheco admitted that the parade of Corpus Christi wouldn’t even pass by the hospital because of the “indecency” of the theater. “Informe del Oidor Juez,” 34r.

244 Howard, The Royal Indian Hospital of Mexico City, 13.

245 In the following years, the procurador general of the Hippolyte order, who will figure below, was named Joseph Pacheco, believed not to be related to, but also not to be confused with Juan Picado Pacheco.
reconstructed hospital was to be christened by viceroy Juan de Acuña y Bejarano, Marques de Casafuerte.

Below I have reconstructed the most likely sequence of events, which were recounted by eyewitnesses to a judge charged with investigating the scandal. Everything in quotation marks is verbatim. My reconstruction, while undoubtedly containing factual inaccuracies which we will never know, nonetheless captures the vitriol between the groups vying for authority over the hospital:

At 5 a.m. or so on June 3rd the Juez Oydor of the Audiencia, Juan Picado Pacheco was preparing for his boss’s arrival when a rabble gang of Hippolyte friars burst into the wards itching for a fight. Picado Pacheco had, in the days before, sought to exclude them entirely from the new hospital, but with their appeals to “the pious and charitable zeal” of the viceroy, they convinced the king’s representative that the Indians’ souls should still matter as much as their bodies. The gang of friars, some former hospital nurses, many from elsewhere, grew to an intimidating number and “clamorously burst out... with their slanderous voices”:

“Of course we can be here, this is our house and today [we will] defend our entitlement."

Picado Pacheco: “Your Paternity [of the hospital] doesn’t provoke me, this house has no boss but the King.”

The leader of the Hippolytes, Padre General Salazar then turned to his followers:

“We have brought here the Cross... and we will put a priest at the head [of this hospital]... and remind the Viceroy that it is our turn to take possession of it. I will defend my entitlement and Our Right!”
Scoffing, Picado Pacheco turned to leave: “Oh yeah, if you have a problem take it to the Viceroy.”

One of the former nurses of the hospital, Padre de la Vega: “Yeah, we will. I know him very well.”

Padre General Salazar, to Picado Pacheco who is turning to leave: “Hey. You. You look at me when I’m talking to you. I am the general of this Order!”

Picado Pacheco: “Padre. You let me be. Let me be. Don’t you provoke me.”

You guys “have no reason to be here. You know all I have done” to rebuild the hospital.

Padre de la Vega: “You [Picado Pacheco] are nothing but a servant, and an idiot.” And if you don’t get out of our way, “we will push our way in there and make off with everything up to the candles in the graveyard!”

Then Picado Pacheco fled to the courtyard to blow off some steam.

One of the younger, more patient friars approached, apparently anointed to cool the scene: “Forgive me sir, we are just defending our rights that were given us by virtue of his Majesty’s order...” All most of us want is to administer the sacraments, “but then all the clerics showed up and Padre Vega stuck his nose where it doesn’t belong.”

Picado Pacheco, with horse steps echoing from the road: Well if the sacraments are enough for you, then “get down on a knee” for the viceroy is approaching.
In the coming days, after a series of interviews and inquiries into these events, the judge concluded that had it not been for the Viceroy’s timely arrival, “there would have been a great fiasco” that morning.\(^\text{246}\)

With the hospital christened by viceroy Juan de Acuña y Bejarano, operations resumed along the general outlines the New Plan of 1711. Picado Pacheco’s pick for majordomo, José de Cárdenas, oversaw general operations and the money and the Hippolyte friars continued as nurses. Additionally, much to their great chagrin, the recently added position of chaplain was now appointed by the Audiencia and was a secular priest (that is, not a member of a religious order but instead reporting to the bishop). The chaplain alone was authorized to administer last rites and held the sole key to the church, which he used to lock the Hippolytes out. Thus the Hippolytes were stricken of their religious function and demoted to mere cheap nurses.\(^\text{247}\) Within the hospital, relations were no better than before the fire: tiffs and spats were common, resentment rife. Padre de la Vega kept sticking his nose in, but as the head of the other friars in the wards, this was where it belonged.

Eventually, the recriminations and mutual spite led to two “secret inquiries” in 1729 and 1730, the latter focusing on the behaviors of friars and the former targeting the pharmacist. The accusations spilled over the brim and required outside mediation. It was a rancorous time, and accusations were leveled in every direction: against the secular

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\(^{246}\) “Informe del Oidor Juez,” 34v, 37v-38r; “Autos sobre la visita que hizo el Virrey, Marques de Casafuerte, al Hospital Real de Naturales, para reconocer la reedificación” (1726), 55r-68v, Hospitales Vol. 56; Exp. 3, AGN.

\(^{247}\) “Escrito presentado por Fr. José Pacheco, Procurador Gral. de la Religión de Sn. Hipólito, sobre asunto de los derechos que le concede la Real Cédula en el Hospital Real” (Fotos, 1721), Hospital Real de Naturales Vol. 101: Exp. 49, BNAH.
forces of skimming funds, failing to provide adequate underwear and chocolate for the friars, of unwise and profligate accounting, and being bad Christians; against the pharmacist for poisoning the patients with deadly, tainted medicines; against the Indians for being indignant, irreverent, lying “barbarians.”

The Hippolyte friars received the worst though. Physicians appointed through the Audiencia charged that “by day, women come and visit them in their cells... and they sneak out through the garbage chute” or the graveyard to venture into the night, leaving the sick unattended. Sometimes women had been seen in their cells “playing music with the friars.” The porters added that the friars did not even sleep in the hospital, but stayed out “until dawn, as is their custom.” One night, the doorman reported, a man came to the gate looking to beat to a pulp a friar who had propositioned his wife; an hour or so later the friar came back disguised in a blanket and women’s shoes. Joseph Antonio Ramírez, an Indian patient suffering a severe fever, had to be tracked down after fleeing the hospital; he reported being hit and shoved around after complaining about the tardy friars and stated firmly that he “wouldn’t go back there for fear of the Fathers.” Joseph de Guadalupe and Andres Joseph, two “Indios ladinos,” complained of vomit fits after having rotten meat thrown at them. Another patient said he was hit in the face with a loaf of bread. Others confided to the surgeon that they were fleeing the hospital to recover at home because at the hospital they were dying of hunger and not receiving any medicine. Indian patient Juan Esteban summed up that the friars abandon their posts and cannot be bothered to give care: everything they do “is contrary to charity.” The majordomo added that the immature friars followed his nephew around the hospital, mockingly calling him
“Don Pedrito.” Overall, as the numerous Indian witnesses attested, the Royal Indian Hospital was notorious and avoided by all who could.248

The historical record is insufficient to determine the exact truth of any of these charges, but clearly in today’s parlance it was a toxic workplace, one that many simply avoided, leaving the hospital unattended. In the language of the day, however, what was lacking was sufficient zeal. And, for the purposes of this chapter, it is this vocabulary that is most important. Although both sides accused the other of all sorts of mismanagement, there was never any fundamental argument that either group was unqualified to have responsibility over the bodies and souls of Indians. The friars already had under their jurisdiction dozens of hospitals, mostly serving in native, rural communities, and throughout the conflict they continued to manage the other royal hospitals they had been granted control over by the king in 1701. Their medical expertise was never a point of contention; while there was much concern that newly recruited friars get some basic training in hospital medicine, in theory they had the general capacity to oversee routine care. The Hippolytes for their part made no issue of the physician’s comparative lack of theological training. The vitriol concerned who had sufficient zeal for the temporal and spiritual health of the Indian.

The tone of these arguments gained its clearest and most eloquent exposition in the ten-year review of the Audiencia-appointed overseer, penned to the viceroy in 1732. Juan Picado Pacheco accused the Hippolyte friars of “defrauding the hospital... not in pursuit of worthy ends or ideas” but out of their dearth of “obligation to conscience.”

248 “ Expediente de la pesquisa secreta y proceso informatoriosobre la asistencia a los enfermos, por los capellanes” (Fotos, 1730), 243r-264v, Hospital Real de Naturales Vol. 86, Exp. 5, BNAH.
Picado Pacheco was blunt: “[the Hippolytes] have always tried to take control of the hospital [because] they want the rents and control over all of [the hospital’s] spiritual and temporal affairs, and to bring an end to the beneficence and patronage that Your Majesty bestows and communicates to the Miserable Yndians.” Through their “slander,” “hatred,” and “wicked spite” and constant efforts to grab the purse strings, they have obstructed operations and neglected their charges, especially the “idolatrous Indians from the frontier” whom the friars refuse to treat. The problem, he was careful to emphasize, was not the cohort, but the very culture of the Hippolyte order, the “rules and exceptions of which, and the observance of these, work against the practice of hospitality.” This can be seen in the decrepit state of the Hippolyte’s primary hospital, Espíritu Santo (Holy Spirit): parish priests won’t even send their followers there and instead “direct all Indians, women and men, to the Hospital of San Juan de Dios,” where the conditions are less abominable. Clearly, Picado Pacheco argued, the Hippolytes were an order in moral decline, with insufficient zeal for their social mandate.249

These inquiries were tabled, and then forwarded to the king for him to adjudicate. Philip V however sat mum on the matter for the better part of a decade. Meanwhile, thrusts and parries persisted in the hospital. In June of 1735, Padre de la Vega of the Hippolytes threw down the gauntlet: all we have wanted, he wrote to the crown, is “peace, quietism, and spiritual progress (aprovechamiento),” -- the realization of the “imponderable and poderissimo zeal of Your Magesty” for the care of the Indians’ souls. The secular majordomos, however, tie our hands with their “mundane disputes” and

249 “Informe del Oidor Juez,” 38r, 40v, 41v-42r, 43v, 45v.
under their leadership, uncounted Indians have died without their final sacraments. Thus, Your Highness, if you want to “forsake the Apostolic and papal Bulls and orders [that reflect] your pious mercy,” then let us pack our bags and go home. It is all or nothing.250

This coincided with inquiries and challenges to the secular administrator, who had done well to increase revenue if not care in the hospital. José de Cárdenas, who had been Picado’s pick for the post and the Hippolytes’ arch-nemesis, was being forced out on the rather trumped up charge of being insufficiently bonded for the collecting debts.251 This matter as well was appealed to the king, to whom Cárdenas defended himself on financial grounds. But he also carefully made evident to the king his abundant and overwhelming zeal for the care and health of Indians. Describing his achievements in the third-person, he reported that “he discusses his zeal with the sick when it is convenient, beneficial and useful; this has become essential, if inexplicable, for the favorable effects it has had, for by this method alone the sufferers are strengthened, and return home in perfect health.”252

A miracle? No. But like a saint’s zeal heals souls, the doctor’s might do the same for bodies.

Finally, on the last day of 1741, Philip V answered in a cédula that unequivocally dismissed the Hippolytes on account of their bad behavior, and enshrined Cárdenas as the

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250 “Hospital Real de Naturales, acompañando el despacho sobre su Administracion y la instancia de la Religion de San Hipólito” (July 9, 1735), 4r-10v, Reales Cedulas Originales Vol. 55, Exp. 2, AGN.

251 Official positions that included collecting tributes, tithes and debts commonly required a form of insurance that would guarantee the estimated collections. Howard, The Royal Indian Hospital of Mexico City, 19.

252 José Cardenas Guzman y Flores, Relación de los meritos, y servicios de Don Joseph de Cardenas Guzman y Flores, natural de estos Reynos,运维 de la ciudad de Mexico, mayordomo y administrador de las renatas, bienes, y propios del Hospital Real de los Indios,que esta sito en ella (Madrid: publisher not identified, 1731), unpaginated.
king’s choice. The language of the cédula mirrored perfectly, nearly quoting, Cárdenas’s own words, praising his zeal and selflessness on top of his financial proficiency. Still, it would take yet another decade to muscle the last of the friars out, who finally retired to their convent in 1753.253

Part of what we witness through this struggle for power at the Royal Indian Hospital is a deep cultural change in the meaning of zeal. As explained in the prior chapter, the Baroque sense of zeal that informed the public health missions of the mendicant orders resembled a sort of mana that descended from God through the social hierarchy. In a trickle-down manner, it reached the lowest ranks of society through the work and love of charity. For conservative voices in the 18th century (and I assume, the 19th), one way to conceive of recovering the social order was through rekindling dissipated and lost zeal. Zeal was the instinctual impulse, or affective motor, by which free will, by choosing faith, overcame human bestial nature and created a Christian society. Zeal aligned the individual with Love and Goodness -- the love and goodness, the only true love and goodness -- that which descends from heaven. Of course, along the way, this also meant alignment with the interests and desires of the king. Again, this does not mean that every use of the word reflected a deep cosmic feeling of situating the self within the world and the universe. But this is what the word ultimately referenced.

What we begin to see early in the 18th century, though, is that signification starts to shift. Zeal begins to lose its ability to align the self with a holy order. And more generally, the affects begin to lose their ability (theoretically, that is) to connect human

253 This paragraph summarized from Howard, The Royal Indian Hospital of Mexico City, 19–20.
life to the grand battle between good and evil. The negative sense of zeal -- that is, sexual desire -- had in Hapsburg times long been understood to be directly connected to Satan’s charms. While it could be and was thought a threat to social order, the primary danger of this negative zeal was its sinfulness and offense to God. In the eighteenth century, this sense of zeal fades. Of course, everyone was as concerned as ever about sexual disorder, but the negative sense of the word begins mean primarily jealousy. It began to signify, in other words, antisocial behavior -- behavior that breaks the bonds of community. Concomitantly, the positive sense of zeal started to mean an impulse towards altruism. This was often but not always connected to a dedication to an abstract notion of “society” or “the public,” (this will be further explored in the next chapter). The common refrain was, “I act with burning zeal that beams with brilliance as it responds to the good of the public and aids and succors the poor.” Zeal, therefore, meant not opening oneself to the holy love that is always present around us; rather, zeal was now the opposite of inaction and apathy -- an enthusiasm one sought to possess. In this sense, it added another duty: the zealous need not merely open oneself, but instead had to inspire themselves with the zeal and love for society. In sum, zeal was ceasing to be the province of the priest and the missionary, and now entered the realm of the reformer and the policeman.

254 “Hospital de San Andrés: experimentos con carne de lagartija,” unpaginated.
“Ministers of Death”

The shift is explained, at least in part, by the general crisis meeting the class of professional physicians in the eighteenth century. It is difficult to remember that these physicians in colonial Spanish America did not hold the prestige we assume today, especially before the advent of the Bourbon reforms in the 1760s. Today the physician is a hero: the prolonger of life, the nemesis of death. The authority of the profession goes nearly unquestioned, excepting among the most eccentric subcultures, and physicians carry with them a certain aura of honor, solidity, respectability -- as if their profession is in itself altruistic, a service to humanity. But this was not at all the case for physicians or their underlings -- pharmacists and surgeons -- within the Spanish empire.

Medical men of both Creole and peninsular extraction suffered an endless litany of indignities within colonial society. John Tate Lanning describes them as at the very bottom of the learned professions in regards to pay, and even more so in terms of social prestige. The lowliest lawyer or humblest theologian stood above even a senior physician in rank and respectability. Within the academy, the man of medicine was the disliked inferior brother to the professor of natural philosophy and the crudeness of his knowledge was underscored by the bloodiness of his hands. Beyond those hallowed academic walls, the healer of bodies was second-rate compared to healer of souls. Such was the unfavorable opinion of physicians that Lanning concludes that only “the dross of the [Spanish] population flocked into medicine” after they failed out of more lucrative careers. This lowly status inspired a good deal of cloying, as practitioners sought to
argue their service to the crown and colony in occasionally successful gambits for patronage and advantageous posts.\textsuperscript{255}

It was not therefore at all evident, as it seems to modern sensibilities, that the Hippolyte friars were usurping the proper domain of physicians when they were promised the reins of the Royal Indian Hospital. Quite to the contrary, it likely seemed to most observers that this was well in keeping with the organization of population health colony-wide -- the Indian Hospital certainly fit much better under the friars’ mandate than that of the Audiencia. More, the future as seen from 1701 promised no rising fortunes for the professional men of medicine. Instead quite the opposite was true: their popularity was only waning and it appeared they would remain a necessary but unvalued presence. All in all, the Hippolytes entered the hospital with a decidedly upper hand in regards to legitimacy.

The unpopular professional physicians held a very small but also the most lucrative slice of the urban medical market, underwritten by their blood purity and their sanctioned medical orthodoxy. The Royal Tribunal of the Protomedicato managed the licensing of physicians, surgeons, and pharmacists within the viceroyalty, which were subject to an exam that reflected a very conservative take on 16th and 17th century Hippocratic medicine.\textsuperscript{256} Accusations of malpractice or unorthodoxy -- unless meriting the attention of the Inquisition -- were also adjudicated by the Protomedicato. More, the

\textsuperscript{255} Lanning, \textit{The Royal Protomedicato}, 217–29.

\textsuperscript{256} This helps explains why the medical innovation that was happening in professional realms was conducted within the regular religious orders, which were somewhat protected from state intervention. Paula De Vos, “The Art of Pharmacy in Seventeenth and Eighteenth Century Mexico” (PhD Diss., PhD Diss., University of California, 2001), 12.
Protomedicato was charged with protecting the blood purity of the medical profession. The taint of Indian or Negro blood disqualified a student far more quickly than stupidity or the use of a heathen remedy and every medical license certified that “his parents are and were Old Christian Spaniards, clean of any tarnished race.” Professional, licensed doctors therefore comprised an elite echelon of medical practitioners, standing above the considerable bevy of unlicensed doctors who dropped out of medical school, and barbers, midwives, and curanderas and curanderos.

They served mostly the upper reaches of Spanish colonial society as well as some indigenous elites, and were therefore in high demand. But by the 18th century, this was no longer a stable market. First, their prices and demand inspired resentment and collectivized institutional innovations by their costumers to undermine their fees (see footnote 4 above). Second, this high market corner became increasingly a pigeon-hole as the population of Mexico City became more demographically varied and the growing market for print caught grasp of the taste for novel and promising medicines, as we will see below. The pariah profession was in need of a rebirth.

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The challenges of legitimacy meeting physicians in the 18th century is usefully illustrated by comparing the contempt leveled at them to the paeans towards the colony’s most famous healer, the Venerable Servant of God, Gregorio López. Rebirth of the profession meant recasting their social role in the terms reserved for this almost-saint.

257 As just one example: Joseph Díaz Brisuela, “Certificate issued to Nicolás Altamirano” (1690), WMS/Amer.51, Wellcome.
First, consider one anonymous screed against the power and political and social influence of the “ministers of death.” It is best to avoid them altogether, urged the author, and let God and nature take their course, for at least Cholera kills you quickly. The doctor, on the other hand, seething with his “contagious aphorisms, a plague with texts,” slowly drains your pocketbook as life painfully fades. “The ground of our bodies is the same from which they derive their silver. For this a miner must excavate the mountain, but the doctor, before becoming a cheapskate for the burial, just empties the mine into his well-placed purse, without even expending mercury for the syphilitic.” The substance of the critique was that the physician’s shtick, his fetish on the market, his contagious aphorisms, and “his honor are a lie, an invented fiction: [his] accolades a laughing matter like the gods a matter of fables; on the side [of truth], medicine hasn’t but imaginary endorsements, fictitious honor, chimeric acclamation.” But the physician’s plague of texts is so thick and so sticky, that few can escape the fable. Fundamentally, it was a matter of honor. A truly honorable man is transparent, and faithfully connects truth and words where we can all see, “like [a] mighty river of crystal clear water.” But the dishonorable physician thrives through opacity and obfuscation. The author was emphatic though the problem was not simply their esoteric knowledge, nor was it only the power imbalance between the patient and doctor. Rather, the heart of the matter was that the physicians use their fables and fetishes to systematically lord over the population of “the Republic” entrapping all within the promises of hope and health that they have no intention or ability to deliver. In their ideal world, he asserts, we would all be weak,
emasculated, ruined, and sick, begging them to take charge of our bodies and our being, at whatever the price may be.\textsuperscript{258}

This stood in sharp contrast to the paragon of medical virtue in New Spain, the immensely popular candidate for canonization and “Venerable Servant of God” Gregorio López. López was a 16\textsuperscript{th}-century hermit, rumored to be of noble parentage, who sought a life of fasting and spiritual warfare in the “wastelands” of frontier New Spain. There, living amongst the Chichimecos (barbarian Indians, as the term then meant) he fought dramatic, physical fights with the devil “therein the blood burst out at his ears, and nostrils” and which left him weakened and sick.\textsuperscript{259} To recover, López took up residence in a hospital run by the Hippolyte Order in the village of Guastepec,\textsuperscript{260} then a distant outpost. There he added native medicines to his already “perfect” and “sublime” and revealed knowledge of geography, physics, and anatomy (not to mention theology and history).\textsuperscript{261}

The Hippolyte hospital in Guastepec was already a famous site of healing. Francisco Hernández had resided there to complete his study of native botanical knowledge in the 16th century with the aid of the town’s sumptuous gardens and orchards and a regional cacique who “directed his learning and arts towards the beauty of

\textsuperscript{258} “Dictamen acerca de los médicos y la profesión de la medicina” (18th century), 75r, 80v-81r, 95v, 115v, Colección Gómez de Orozco MS. 82, BNAH.


\textsuperscript{260} To the historian’s great consternation, in colonial documents the village of Guastepec is also spelled, Guaxtepec, Yaotepec, Guastepeque, Huaxtepec, Oaxtepec, Oastepec, Guatepec, Guaztepec, Cuastepec, Hoaztepec, Hoaxtepec, and Huatztepec resulting in no little difficulty in distinguishing it from neighboring villages. Other spellings are also likely.

\textsuperscript{261} Losa, \textit{The Holy Life of Gregory Lopez}, 111–14.
nature.” The famed doctor Francisco Ximénez later ensconced there to edit and publish Hernández’s work for popular audiences and many authors remarked that pilgrims arrived from afar in search of succor. But it was López’s presence that sealed Guastepec as a mecca for convalescence. López’s friend and hagiographer, Francisco Losa, described it such:

God put on the mesa of that desert every type of poor, and needy, men, women, Spaniards and Indios, who came to the Hospital, not only from all parts of New Spain, but from Guatemala, and from Peru, for the warm welcome they find there and the abundance of that which is necessary for health, and comfort, and the great charity, and attention by which they are cured, and in this way, almost all that go there with incurable infirmities in little time recover their health completely.

Or, in López’s own words (supposedly): “Praise to God, Padre Losa, that if I could bring to my Hospital all of the poor of the world, such certain faith I have in Jesus Christ, that all those could be provided for in good time.”

262 Antonio Solís y Rivadeneyra, Historia de La Conquista de Mexico... (Madrid: B. de Villa-Diego, 1684), 449.

263 Augustín de Vetancurt, Teatro mexicano, Descripcion breve de los sucesos exemplares, historicos, politicos, militares, y religiosos del Nuevo Mundo occidental de las Indias ..., vol. 1 (Mexico: Doña María de Benavides, viuda de Juan de Ribera, 1698), 54–56.

264 Francisco de Losa, La vida que hizo el siervo de Dios Gregorio Lopez, en algunos lugares de la Nueva España (Madrid: Impr. Real for A. del Ribero Rodriguez, 1658), 21r-v. His first hagiography was published in 1613 in Mexico City, and was subsequently published in Seville, London, Madrid, Lisbon, Paris, and Valencia before the century’s end.

265 Losa, 21v.
Figure 8: The village of Guastepec during the time of López’s residency. At the lower right is the famed garden and immediately to the left of that stands the Hippolyte hospital. Note as well the numerous springs for which the town was famous. Guastepec, September 24, 1580, Benson Relaciones Geográficas Collection Online, University of Texas, https://www.lib.utexas.edu/benson/rg/rg_images9.html.
After his death in 1596, it was clear to many in New Spain that Gregorio López’s life should “count among the miraculous.”

Despite the concerted campaign (and the king’s endorsement) for papal recognition of sainthood, López never did become Latin America’s first saint: Lima beat Mexico to this honor in 1671. López’s renown continued to grow, though, and three years after that loss the *Treasury of Medicines*, supposedly penned by him, was published in Mexico. The dedication explained that, “With so many miracles to his credit... it is only appropriate to take up the pen now to convince others that he is a valid candidate for canonization.” In the years that followed, the torch was taken up again by the appointed Congregation of Sacred Rites at the Cathedral, and was rekindled time and again in the 18th century.

As for the *Treasury of Medicines*, several things distinguished the work from those that preceded it and that followed. First was that the legend antedated its

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267 That is, Saint Rose of Lima.

268 The Spanish historian of medicine Francisco Guerra claims to have seen and confirmed the original manuscript of *Tesoros de medicinas*, which he claims is in the hands of a private collector in Ireland and is adamantly not shown to researchers. Guerra states that this confirms Gregorio López’s authorship of the book with his name. Until this manuscript is allowed further examination, however, we must call into doubt such authorship. Francisco Guerra, *El Tesoro de Medicinas de Gregorio López*, 1542-1596 (Madrid: Ediciones Cultura Hispanica, 1982), 26-27.


270 Diego de la Sierra, *Nos el doctor D. Diego de la Sierra canonigo doctoral desta Santa Iglesia Metropoitana de Mexico ... sobre la pureza de fe santidad de vida, virtudes, y milagros en especie del venerable siervo de Dios Gregorio Lopez primer anachoreta en estas Indias Occidentales de la Nueva-España* (Mexico, 1686), 1r-3v.
publication. At its first edition, already the two protomedicos who edited it reported that “the common sentiment of everyone is that his science was supernatural and came directly from God.” Moreover, it was reputed that López’s corpse emitted that sweet fragrance specific to saints and even before he died bits of his clothing were sought far and wide, even as far as Spain, and were credited many miraculous recoveries. Likewise, after his residency there, the Hospital at Guastepec became the most prominent destination in New Spain for the convalescent, where relics of López were employed for the most severe cases. Suffice it to say that “the public fame of the Saintliness of this servant Gregorio López, and the devotion of the people” made the Tesoro de medicinas highly anticipated. Second, and unsurprisingly, the book was a smashing success, not only in New Spain, but in London, Madrid, and Seville. Its popularity was of course greatest in the colony. In contrast with other pre-1700 New Spanish imprints, many copies of the Tesoro have survived to the present, as well as numerous partial and whole manuscript copies of the printed text, which is certainly not the case for other New Spanish medical texts. More than a century after its release, Protomedico Juan Manuel Venegas named it still the most popular medical book in the colony. Third, as the great Creole Franciscan chronicler Agustín Vetancurt expressed, popular opinion was

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271 López, Tesoro de medicinas para diversas enfermedades, 2v.
273 Sierra, Nos el doctor D. Diego de la Sierra canonigo doctoral desta Santa Iglesia Metropoitana de Mexico ... sobre la pureza de fe santidad de vida, virtudes, y milagros en especie del venerable siervo de Dios Gregorio Lopez primer anachoreta en estas Indias Occidentales de la Nueva-España, 1v.
274 Even John Wesley praised López’s wisdom.
275 Juan Manuel Venegas, Compendio de la medicina: o medicina practica (Mexico: Felipe de Zúñiga y Ontiveros, 1788), unpaginated frontmatter.
that López validated certain Aztec cures included in the book through revelation, “diverse experiments and great judgement.”

It is not that the *Tesoro* was a book about supposedly native cures. Rather, the majority of the medical advice therein came from common European texts and household medicine. However, it was the inclusion of some American botanicals and their validation by so esteemed an authority that caught the popular imagination. Additionally, as opposed to earlier works such as Hernández and Ximénes’s *Quatro libros*, the *Tesoro* did not bill itself as articulating a separate medical tradition. Rather, it was self-consciously fashioned as a book for the people, relaying what works in simple, clear language. Altogether, the *Tesoro de medicina* was the paragon for the popular medical market.

For the medical professions, struggling as they were with legitimacy, Gregorio López’s example pointed the way. This path was eyed as soon as the *Tesoro de medicinas* was published in 1674. In the preface the Protomédico José Días Brizuela deemed that López deserved the honorific of “doctor” because of his expert knowledge and contribution to the health. And further Brizuela and his co-editor glossed López’s remedies such to “inform ignorant readers of the Author’s meaning, so that they do not [prematurely] condemn the work.”

But while these doctors sought to extend the medical honors and virtues of expertise and authority to the almost-saint, these encomia flattered the profession more than the deceased. The saint’s virtues of “love of the people,” humility, public service, simplicity, and unpretentiousness was the inverse of physicians’ renown for greed and elitism.

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277 López, *Tesoro de medicinas para diversas enfermedades*, frontmatter.
In all, the point is that during the same period in which the Royal Indian Hospital was in the throes of the dispute between the Hippolytes and secular forces, the medical profession at large was in need of rebirth. Physicians as a class were wildly unpopular and resented, and culturally they had little legitimacy in claiming the mantle of public service from their elitist perch. In this climate, in the early 18th century there began a new medical discourse of a desire to contribute to the common good, a “zeal for public health.”

Medical Epistemology and the Print Market

Shaping this zeal and the discourse of public service in the 18th century was the emergence of a novel print market for easy-access curatives, many of a supposedly indigenous extraction. This market challenged the authority of medical orthodoxy and articulated more convincingly a sense of representing the people’s medicine. As the medical profession sought to assume the moral legitimacy of catering to “society’s” needs and managing the health of Amerindian subjects, they had to usurp or at least interject themselves into this popular sector.

Until the 18th century, the print market for medical manuals in Mexico consisted of canonical texts imported from Seville and field manuals printed in Mexico City and explicitly intended for soldiers and missionaries on the frontier. As we saw in chapter 1, the latter mixed elements from European household medicine with cribbed and highly simplified notes on native medicine from Francisco Hernández’s works to devise a
sufficient first-aid kit for “those parts of New Spain, where there is no one who cures.” Or, as another put it, “I desire to make known the true medicine of this land, being so necessary, for the whole of it is unpopulated, for those who live on estancias and mines, where there is neither doctor nor pharmacist to appeal to for treatment.” In yet another work, the endorser explained: “[In this book you will find everything needed] to heal the poor Indians, for the herbs the author suggests grow abundantly in the forests, with which you may fulfill the teaching of Jesus Christ: cure the sick, with such sensible benefit the door is open to persuade them to enter with us into the Kingdom of God.” But what emerged in the 18th century was a more commercialized print market for medicine, mostly consisting of single remedies being promoted by their purveyors. And with these began a new emphasis not on treating illness, but on completely negating or conquering it.

Physicians, in general, for centuries were never wont to promise their patients quick and full recovery, lest they be trailed by a parade of disgruntled customers

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278 Barrios, Verdadera medicina, cirujía, y astrología, en tres libros dividida, frontmatter. Also see, Fray Agustín Farfán, Tractado brebe de medicina y de todas las enfermedades (Mexico: Pedro Ocharte, 1592).

279 Hernández, Quatro libros. De la naturaleza, y virtudes de las plantas, y animales, que estan receuidos en el uso de medicina en la Nueva España, y el metodo, y coreccion, y preparacion que para administrarlas.

280 Italicized parts in Latin in original. Juan de Esteyneffer, Florilegio medicinal, de todas las enfermedades, sacado de varios, y clasicos authores, para bien de los pobres, y de los que tienen falta de medicos, en particular para las provincias remotas, en donde administran los RR. PP. missioneros de la Compañía de Jesus. Reducido a tres libros. El primero de medicina, el segundo de cyrurgìa, con vn apendix que pertenece al modo de sangrar, abrir, y curar fuentes, aplicar ventosas, y sanguijuelas. El tercero contiene vn catalogo de los medicamentos vsuales, que se hacen en la botica, con el modo de componerlos. (Mexico: Alonso Balvas, 1729).

281 As Martha Few and others have explained, during the 18th century the Spanish verb curar transitioned from denoting succor and care-for to cure in the absolute, final sense. Few, For All of Humanity, 50.
defaming their authority and honor. Publishers, however, did not run the same risks, and were free to promise earthly salvation. Thus the newly advertised medicines promised all sorts of quick fixes for entrenched illnesses. For example, an excerpted reprint of João Curvo Semmedo’s recipe of the squared stone, learned “from the Monks of Tartary,” promised that it eased childbirth and cured outright piles, faintness and dizziness, headaches, colic, other stomach pains, pleurisy, melancholy, bladder stones, intestinal pains, heavy or clotted blood, bloody urine, and asthma. A similar tract listed twenty-two uses for pumpkin seeds, including curing mange, snake and caterpillar and “any other type of poison”, low blood pressure, “women’s troubles”, shock, and so much more. Of another estimable simple, the advertisement concluded that “In the end, its virtues are so many and its effects so marvelous, that it can verily be called the sanalotodo (cure-all).” As each broadside avouched, they were all marvelous.

The most sensational and entertaining of these all was printed by the firm of Joseph Bernardo de Hogal in 1737: Medicinal Compendium of Marvelous and Experienced Remedies Against Plague, originally by Juan Francisco de Capello, an exceedingly obscure 17th century “philosopher” from Genoa. Indiscriminately, the text drew speciously from any and all authorities mixing Galen, Avicenna, Hippocrates,

283 *Recepta de las Pepitas de Covalonga* (México: José Bernardo de Hogal, 1730). Also see, “Medicamentos experimentados y provechosos para las enfermedades siguientes.” (1700), WMS/Amer.7, Wellcome; “Remedios muy importantes experimentados y saludables para todo genero de personas” (1700), WMS/Amer.6, Wellcome; Nicolás José de Torres, “Virtudes del Guaiacan, o palo santo” (18th Century), WMS/Amer.11, Wellcome.
284 N. Ugabe, *Virtudes maravillosas de la contrayerva, llamada por otro nombre de la vivora, en otros partes coronilla* (México: José Bernardo de Hogal, 1737).
285 A disproportional number of these ads, broadsides and manuals were printed by this house, which likely helped instigate the going trend.
Aristotle, Plutarch, Paracelsus, and Marsilio Ficino with less durable but potentially more appealing names for some readers, such as, “the Grand Turk,” “Augustus Cesaer’s doctor,” the undertakers of Milan, “Moyses of Egypt, a wise doctor,” Saint John of Damascus, “a surgeon friend of mine, Maltés,” a “Grand Duchess,” and a number of unnamed, but surely “great” doctors. Capello gave no heed to contradictions of doctrine, philosophy or method, and made no professional judgments for his readers, but rather, offered all remedies as equally marvelous. What Pliny the Elder heard from King Mithridates VI (despite not being coevals) is just as valid as the alchemy of Paracelsus, which is just as valid as the “secrets” of Milanese undertakers. It is all true -- the best of all worlds.286

The result was an over-abundance, a surfeit of cures, preventatives and treatments for plague, forty-one in all. One, theriac (concoction) he introduced as a “Secret and remedy against the plague, proven on many patients by great and illustrious persons....” Of another, he impressed that it is “most perfect and proven,” and the next, “Another most perfect (perfectissimo) remedy”; the one after that, “A miraculous concoction against plague... according to countless experiences.” A few remedies leaned on the likes of Galen or Aristotle for authority, but most depended on a more vague fetish of the ancient past and occult knowledge. Concerning the “True Secret, and every day experienced by the Great Turk against the plague of Constantinople,” Capello explained to the reader its unlikely path to print. The unnamed Great Turk gave the recipe to an

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286 Juan Francisco Capello, Compendio medicinal de marabillosos, y experimentados remedios contra la peste: assi preservativos, como curativos para beneficio universal [&c.] (Mexico: Reprinted by J.B. de Hogal, 1737).
Armenian, who handed it to a “Genovese Gentleman, who as a great favor gave it to me two years ago, and I, to not deny this treasure to the world, have deemed to give it to the public [in the name of] honor, and to the glory of God....” Of another, he wrote, “I copied [it] from an ancient book, written by hand, which contained other beautiful (bellissimos) secrets, which I have experienced to be most true (verdadissimos).” With so many, and such superlative secrets brought to light, a reader would be excused for questioning why mankind need suffer plague at all.  

What Capello’s book best represents of the age is a kind of epistemic nihilism, in which everything was equally more or less true. Tradition, ancient lore, oriental legends, common home remedies, great minds, professional prescription, experiment and experience all had equal truth power. More, the pathways of knowledge to the reader were so convoluted, so full of chance and contingency, that truth could not be trusted to prevail. This was a capricious world, where truth was fleeting and everyone or no one should be trusted. In a certain sense, Capello was continuing a tradition of his Iberian forbearers. During the age of exploration, enterprising authors such as Nicolás Monardes, Garcia da Orta and Pedrarias Benavides published commercial blockbusters introducing European readers to the “marvelous” medical “secrets” of the East and West Indies, which they validated on the grounds of their professional experience with them (see chapter 1). But there was a significant difference between such 16th century

287 Capello, 19, 20, 28, 34–35.

288 Nicolás Monardes, for instance, expressed that his effort was to “see and know the properties, to experience the various and great effects, that the Indians claim” for the medicines being sent from the West Indies. As a foremost physician of Seville, he positioned himself as the reliable, experiential tester of the unregulated and unproven materia medica flowing into Europe. Monardes, Dos Libros de las cosas que traen de nuestras Indias Occidentales, folio Hvi; Benavides, Secretos de la Chirugia; García da Orta, Coloquios dos simples, e drogas he cousas medicinais da India e assi dalgu[m]as frutas (Goa: Ioannes de
popularizers and their 18th century descendants. Monardes and his ilk marveled over the meeting of civilizations and sought to accumulate for Spain the natural wonders of newly conquered lands. Although their enthusiasm (and commercial interests) could get ahead of them, they overall sought to apply learned authority to the imports from abroad to test their validity and introduce them to the shopping public. Capello, quite to the contrary, was a great leveler, an epistemological populist, destroying even the question of truth.

Capello’s manual is an extreme example, but not an outlier. An anonymous writer caught the same wind and sought to update the Italian Leonardo Fioravanti’s 16th-century alchemical masterpiece for use in New Spain. Although never quite finished in time for his supposed patron, the viceroy Duke of Linares, the author added Mexican herbs and curatives that he dated to pre-Hispanic times to classic alchemical recipes for turning copper into gold and creating a philosopher’s stone. Along with recipes for gout, plague, and heart attacks we learn about the astrological powers of the metallic planets, invisible ink, remedies for scabies and over-stimulated nerves, how to call the animals to barn and refine silver, how to meld many pearls into one, how to make the therica magna (universal antidote) and to make mercury congeal into silver, Aristotle’s

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Endem, 1563). Also see, Fragoso, Discursos de las cosas aromáticas, arboles, y frutales, y de otras muchas medicines simples que se trae de la India Oriental y sirven al uso de medicina; Acosta, Tractado de las drogas, y medicinas de las Indias Orientales, con sus Plantas debuxadas al bivo.

289 Leonardo Fioravanti’s work was well chosen for emulation. William Eamon writes that in the 16th century Fioravanti was particularly keen at exploiting “both the fashion of alchemy and its esotericism to promote his ‘new way of healing’” and thereby self-fashioning a lucrative identity as a popular healer. William Eamon, “Alchemy in Popular Culture: Leonardo Fioravanti and the Search for the Philosopher’s Stone,” Early Science and Medicine 5, no. 2 (2000): 196–213.

290 Anonymous, “Recetario titulado ‘Secretos del libro 30. de los Capítulos medicinales de Leonardo Florabante’” (XVIII century), Gonzales Ortega 118, BNAH. Although begun in 1716, notes within the text make it evident that it was still in the works in the 1740s, long after the Duke of Linares’s tenure. Some of the author’s claims to official patronage seem spurious, although intimate knowledge of regional politics evidences that the anonymous author was in some way connected to governing circles.
recipe for making perfect medicinal silver, “an approved recipe for making silver by master Buna Benturacena,” Juan Teutomio’s recipe for turning silver into gold, the recipe for “Water of the 30 Virtues,” and how to use canon fire against a tornado at sea. The unavoidable conclusion reading his 527 recipes is that truth is not distinguishable from fiction and therefore it is best to believe it all.

Another work from later in the century and attributed to one “Dr. Michael, from Milan” flatly shunted aside all academic learning: “Man has searched for many remedies for his illnesses; but it is from animals, taught by Divine Providence, that men have learned most medicine.” Many of his animal-teachers were laughable even for contemporary readers, and were likely meant to be, such as “If you can’t work [because of diarrhea], give yourself a salt enema, just as the Ibis bird does.” But the overall advice of the work was “if you can’t do one of [the remedies], do an easier one.” Such was the profound popular cynicism regarding medical authority that the print market exploited.

Beyond the works treated thus far there were numerous broadsides, handbills, and manuscript advertisements for phenomenal cures. This is the sort of ephemera that seldom survives the rot and mold of ages or the dozens of hands they might have passed between, but what does persist evidences a burgeoning market patent and novel medications.

Beginning early in the 1700s, handbills emerged hailing the curative

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291 Dr. Michael, of Milan, *Botica general de remedios experimentados* (Puebla: Pedro de la Rosa, 1797), 1, 16.

292 “Medicamentos experimentados y provechosos para las enfermedades siguientes.”; “Remedios muy importantes experimentados y saludables para todo genero de personas”; *Recepta de las Pepitas de Covalonga; Recetas de las virtudes de las Jojovas que se cogen en la provincia de Sinaloa* (México: Viuda de D. José Bernardo de Hogal, 1749); Joao Curvo Semmedo, “[Secretos medicos]” (1750), EPB American M.40, Wellcome; “Medical botany, Philippines: therapeutic uses of Manungal” (1750); “Reximen de las
virtues of squash seeds and jojoba, porcupine gall stones and magnets, stevia and chia seeds, maguey and begonias, gentian flowers and sesame seeds, and many special composites. Most any common ailment was treatable: melancholy, malaria, rheumatism, inflammation, curses, snake bites, stomach cramps caterpillar bites, mange, open wounds, rebellious fevers, spontaneous abortion, bloody flux, gout, hysteria, and shock. Most of these ended in a line such as, “This medicine is made in the pharmacy of Don Joseph Galiano on Monterilla Street and sells for four reales,” “for Spaniards who can afford it, one peso per ounce, for the poor Indians, even less,” or, whatever price at whoever’s pharmacy on whatever street.

Volas o Piedras del Puerco Espin” (1750), WMS/Amer.68, Wellcome; Virtudes experimentadas en las piedra imán de venenos, aliás cobra, serpentina, ó de la culebra, que es una cosa misma (Mexico: publisher not identified, 1750); Rezeta espiritual contra dolores colicos, de hijada, de piedra, de riñones, y contra qualquier otro genero de enfermedad: la devocion de San Liborio (Mexico: Impresa con las licencias necesarias en la imprenta del Rl. y mas antiguo de S. Ildefonso, 1765); José Rosuela, “Secretos medicos y chirurgicos” (1771), WMS/Amer.23, Wellcome; José Ignacio Bartolache, Instrucción para el buen uso de las pastillas marciales, ofierro sutil (Mexico: publisher not identified, 1774); Joseph Galiano, ed., Rezeta muy util, para sanar de todo genero de tercianas o quartanas, aunque sean embejecidas, guardando el metodo siguiente … Esta medicina se hace en la botica de Don Joseph Galiano (Mexico: publisher not identified, 1780); Ángel Basilio de Puerta, “Recetas medicas que da el Doctor y Maestro Peña.” (1783), IV Protomedicato 4789-008, AGN; Virtudes del agua de melisa compuesta, vulgarmente dicha Agua del Carmen (Mexico: The Heirs of J. de Jáuregui, 1787); Nicolás Biana, “Date noticia de las curaciones” (1790), WMS/Amer.39, Wellcome; Receta especialisima contra calenturas, heridas dobles, ó sencillas, aunque sean muy envejecidas (Mexico: publisher not identified, 1790); Rafael Ramos de Vilches, Receta … para curación de dolores reumáticos, venéreos y escorbúticos. ([Puebla]: P. de la Rosa, 1794); “Receta para la epileccia o mal de corozón” (1800), Wellcome; Torres, “Virtudes del Guaiacan, o palo santo”; Emplastro especifico de estavillo (Mexico: publisher not identified, Late 18th century); “Recetas y remedios para catarro, dolor de estomago.” (XVIII Century), IV Protomedicato 4022-020, AGN; “Receta para preservarse de la Escarlatina” (XVIII Century), E. Guzmán, Box 148, Doc. 7, BNAH; Anonymous, “Documento impreso en varias lenguas que es una propaganda de la Sal de frutas” (XVIII Century), E. Guzman Box 148, Doc. 8, BNAH; Anonymous, “Recetario titulado ‘Secretos del libro 30. de los Capítulos medicinales de Leonardo Florabante’”; Luis Beltrán, Rogativo de salud, oración, y ensalmo del Santo Fr. Luis Beltrán con el qual curaba todas las enfermedades (Mexico: Imprent Nueva de la Biblioteca Mexicana, 1755); Virtudes de la habilla del Dariel, que llaman de Guathemala (Mexico: José Bernardo de Hogal, 1737). Cayetano Francisco de Torres, “Virtudes maravillosas del pulque, medicamento universal o polychresto” (1748), MS13, Biblioteca Nacional de México.
Most importantly, this ephemera struck the populist tone of Gregorio López’s legacy and claimed to supply the people’s medicine. “Towards the end of succoring the needs of the sick and poor, who have nowhere else to turn for the to cure the illnesses that afflict them”: such a refrain became commonplace.\textsuperscript{293} A few of these pamphlets and advertisements directly cited López as their inspiration. One broadside advertising the “marvelous virtues of the counter-herb known as the Viper” emphasized that its author was “the Venerable Brother Ugabe, hermit, who follows in the footsteps of the Venerable Gregorio López.”\textsuperscript{294} Later in the century López would continue to be invoked in medical advertisements in the \textit{Gaceta de Literatura}. Directed towards “all kinds of people” and touting ingredients that were typically locally sourced and commonly available,\textsuperscript{295} these ads claimed the social virtue physicians also sought.

And so unsurprisingly by the latter part of the century physicians too took part in this print economy. As will be explored in the following chapter, the (in)famous lizard cure of the 1780s was originally publicized by a professional physician, and José Ignacio Bartolache, one of the most famous physicians and enlightenment essayists of his day, hawked his “martial pills” which, “none have found in any medical book” and therefore “must be understood as something new, deserving to be called a secret.”\textsuperscript{296} Eyeing a potentially large market, Bartolache even issued his advertisement in Nahuatl:

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\textsuperscript{293} Biana, “Date noticia de las curaciones”; Capello, \textit{Compendio medicinal de marabillosos, y experimentados remedios contra la peste}, frontmatter.

\textsuperscript{294} Ugabe, \textit{Virtudes maravillosas de la contrayerva, llamada por otro nombre de la vivora, en otros partes coronilla}.

\textsuperscript{295} The usual claim was that a specific preparation was critical, and that this is what the pharmacy or herb seller provided.

\textsuperscript{296} Bartolache, \textit{Instruccion para el buen uso de las pastillas marciales, ófiero sutil}.
“Teachings about a new medicine, [so] that commonfolk will know of it, and how, how often, and how much to take.” Like other cures, the active ingredient was simple and common: in this case “pure” iron. But buyer beware, for “by the council of ignorant persons” you may end up with “one of the hundred others of this type”: best to buy direct.

These were not the cure-alls, the panaceas of old. Renaissance Europe was rife with *theriacas*, bezoar stones, and countless other miracle medicines good for balding heads, aching feet, painful bowels, and so much more. Those were all based on a sense of balance, of ontological completion of the world, such that each evil could be negated by an existing good. But by the eighteenth century, it was not one medicine, but the great plentitude of them that promised release from earthly suffering. Thus Capello advised his readers to collect them all: “It must be advised that it is best to vary these remedies as much as possible, taking one thing today, another of them tomorrow of equal virtue, such that the nature (of the body) accustomed to one does not become too familiar, which would lessen its virtue.”

It was in this context of the burgeoning medical market for specifics and patent medicines that New Spain’s physicians developed a new-found enthusiasm for cures of an indigenous derivation, however that may be defined. On the one hand, this was a large market, but also, and more importantly, this enthusiasm was necessary for building public trust and confidence in an age when the public sphere was becoming the dueling ground for reputation and the growing social interventions of the Bourbon state were

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297 José Ignacio Bartolache, *Netemachtíliztlī. In Itechpa in ċè yancuican pahtli, inic in Macehualtin quimatizque iquin yeiman, quenin, ihuan quezqui quicelizque* (Mexico: publisher not identified, 1774). I thank Camilla Townsend for this translation.

298 Capello, *Compendio medicinal de marabillosos, y experimentados remedios contra la peste*, 25.
cause for distrust. And, as we are about to see, it shaped the program for the Royal Indian Hospital as well.

**Steamy Bodies at the Royal Indian Hospital**

Ejecting the Hippolyte friars and developing a fully secular vision for the Indian Hospital did not prevail until the 1760s, but when it did, it entailed a new articulation of purpose and mandate. The new hospital would not be a hospice of last resort, nor would it be an insular space of quarantine. Now it aspired to be outward and future oriented, with a social mission and contributing to medical progress. “The miserable Indians,” as they were so often referred to, figured in new calculations of imperial duty, social governance, and professional legitimacy.

Reflecting the famous virtues of Gregorio López, mirroring the public service of the print market, and refuting the opacity and greed cited against the profession, the hospital now evinced (it was hoped) benevolent governance. And more, it demonstrated the physicians’ right to leadership.

This all developed under the directorship of Antonio de Arroyo, majordomo of the hospital from 1762 to his death in 1788, who cracked open the hospital to make it visible and transparent and to prove to the public the veracity of their zeal for public utility. Two structural innovations marked the physical plant of the hospital and made concrete the transformation happening on the ideological level. First, the hospital’s central courtyard was reimagined as a theater for public anatomical dissections. Such courtyards were a universal feature of colonial hospitals, forming a domesticated outdoor space, tamed and shielded from the contamination of the street and containing the
noxious humors of the sick. The anatomy theater inverted this relationship, putting on display dead Indian bodies for a new mission of enlightening the public. Second, a few yards away were constructed a *temascal* and a *placer* bath. These had long been reviled yet mostly tolerated social institutions persisting since pre-colonial times. Bringing them into the hospital extended control over the lives of patients and penetrated the secret interior of this popular pastime.

Immediately upon taking the reins from the probably corrupt Cárdenas, Antonio de Arroyo set about a number of reforms which culminated in a lengthy process of drafting a “constitution” for the institution. Arroyo felt at pains to articulate a secular mission for the hospital that broke free from Baroque notions of suffering, succor, and salvation; and even in the 1760s he felt the need to dispel any doubts about usurping the prerogatives of the holy orders. He therefore inaugurated this process with a historical clarification, one that would later be legitimated by the king and the viceroy as the official history of the hospital and printed and distributed with all the formal auspices. The hospital, he argued, had not been founded by the Bishop of Santo Domingo in 1531 during a temporary posting in New Spain as part of his missionary practice, which had been Hippolyte narrative formed by Cabrera. In fact, it was not established under religious auspices of charity at all. Rather, since Carlos V’s original proclamation in 1553, the hospital was the concrete evidence of the sovereign’s “piety and love towards the Indians.” With all the due hyperbole necessary to rewriting history, he summed up the hospital’s role thusly:

These unhappy humans, dominated for so many centuries by blind superstition and idolatry, were bloody victims that fed the barbarous inhumanity of their own
ministers, advanced by the ancient, infernal hatred of the common enemy of our human nature, were, since the discovery of these latter-day provinces and their remarkable subjection to the dominion of the Catholic Kings of Spain, the principal object of their piety, their religion, and their zeal... Concerning the care owed to the Pueblos that are his subjects, our glorious Monarchs, since the conquest of this vast continent of America, have been constantly and successively meditating and deliberating on the most efficacious methods to effect the conservation, growth, peace, and rest of these beloved vassals, whose relief and happiness have always been the dignified goal of His Royal clemency to liberate them from oppression, forced labor, and other grievances.

The hospital, nay the whole colonial enterprise of the crown, argued the new director, was actually a humanitarian mission. And the empire was good, according to Arroyo, because through it a better society was possible, one based on compassion and justice. However, this royal, 16th century prerogative of Charles V and Philip II had been lost through centuries of moral decline; now is the hour to reclaim the “fervor and charity of our true ancestral Spaniards.”

The temascal, the placer, and the anatomy theater were elemental to rewriting imperial history in a secular tone.

Arroyo had constructed the temascal and the placer between the kitchen and the laundry. He conceded, as he was sure would be the viceroy’s first reaction, that “the repugnance that they cause” would have to be overlooked. But the benefits outweighed the costs, as was obvious “from the favorable results effected by the natural customs of

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299 Recently, historian Orlando Bentancor suggests that at the highest intellectual circles this transformation in the ideology of empire was effected in the 17th century. His prime example is the highly influential treatise *Política indiana* by Juan de Solórzano Pereira (1648), in which the jurist abandons the task of legitimating the conquest (as had long been the cause of jurists and intellectuals) and accepts that it was imperfect, even unfortunate, but *a fait accompli*. Therefore, he instead defends the empire on the grounds of the future -- the good future that the crown alone can effect. Bentancor, *The Matter of Empire*.

300 Hospital Real de Indios (Mexico City, Mexico), ed., *Constituciones y ordenanzas para el régimen y gobierno del Hospital Real y General de los Indios de esta Nueva España, 1778*, v. B-1 (México, 1778), unpaginated; Antonio de Arroyo, “Informe del administrador del Hospital Real al virrey sobre el estado actual” (1764), Hospital Real de Naturales Vol. 77; Exp. 12, BNAH.
[Indian] doctors.” But more importantly, Arroyo emphasized, was that the temascal and the placer would help overcome the competition and aid in asserting authority and control over their charges. It had become an issue that whenever their backs were turned the Indian patients were sneaking out into the neighborhood to seek out comfort and recovery in the private temascales around the city. Not only did this remove them from the premise, in violation of the hospital’s rules and the principles of quarantine, but also it exposed the infirm to the uncontrolled qualities of the air outside as well as the vile behaviors known to persist in the bath houses.301

The temascal and the placer were an unprecedented departure for the Royal Indian Hospital. In theory at least, the hospital had been founded and rebuilt on the idea that the castas and the Indios of New Spain knew no real medicine and moreover that healing would require isolation from the loathsome social behaviors that were known to engender disease. It was on these principles -- as well of that of consecrating a sacred ground of succor and deliverance -- that the Royal Indian Hospital, like all hospitals in the realm, was built in the compound style common to convents, monasteries, fortresses, and elite homes. A central courtyard was ringed by an arcade, behind which stood two tiers of rooms that served as dormitories, storage, kitchen, etc. Typically in colonial hospitals one wall of the courtyard was formed by the church and another opened into a walled cemetery. Significantly, as in the case of the Indian Hospital, there were commonly only two doors to the compound, one leading out the back for deliveries and refuse, and the

301 Antonio de Arroyo, “Petición de Don Antonio Arroyo sobre que se le conseda fabricar un placer y un temascal para el uso de los enfermos y la agua suficiente para el gasto del Hospital” (February 23, 1763), Hospital Real de Naturales Vol. 101; Exp. 46, BNAH.
other the main entrance with a gate and sentry. The idea was for the hospital to be a closed, self-sufficient community. Of course, this fort-like structure served the purpose of quarantine well, but that was not the primary function of the form. Rather, it was to remove the patient from the conditions of his disease and symbolically and physically enter into a safe, holy space. Underscoring this, many hospitals were entered only through the church, or via a walled patio in which a statue of a saint invited the sick to choose from two doors, the church and the hospital. Once in the Royal Hospital, patients were forbidden to leave until judged fit and only in certain circumstances were they allowed visitors, who were prohibited from bringing food or drink. Most of the time, the terminally ill died alone with the chaplain. Even the friar-nurses were barred from exiting the compound without authorization. Bringing the temascal into this fortress extended control over the infirm, but risked that it might be a cultural Trojan horse. Moreover, it meant acknowledging that there were other viable realms of medical expertise.

In truth this was not the first such medical practice self-consciously incorporated into the Royal Indian Hospital. Medicine as applied in 17th-century colonial hospitals is notoriously opaque for want of sources on day-to-day operations, but a single bound volume of medicines distributed in the Indian Hospital in 1721 has survived the ages. Few, if any, of American medicines adopted by Europeans in the 16th century (tobacco, guayacan, sarsa parilla) appear, and instead there is a steady line up of the cheaper drugs

302 Although this was not the case in the 18th century Indian Hospital, it likely was before the 1722 fire. Sufficient evidence for the universality of this form is visible in the many hospital plans reproduced in Francisco Guerra, El Hospital en Hispanoamérica y Filipinas 1492-1898 (Madrid: Ministerio de Sanidad y Consumo, 1994).
imported from Spain, including many special mixtures (rose water, Valencia pomade, endive emulsion, Water of the Queen of Hungary, and Ointment of the Thirty). But surprisingly, a significant portion of the medicines distributed are labeled as “atoles”: 

* atole de lombrises, violet atole, golden atole, atole of borax and pink honey, sweet almond atole, atole of sesame, atole completo, endive atole, mint atole, lily atole, atole rosado enfansino, caper atole, and bitter almond atole. These were distributed with careful attention to medical needs, “according to their sickness and the duration thereof,” and inclusion within the pharmacy logbook of the hospital makes it clear that the medical role of these stews was recognized.  

Judging from the months of May and June of 1721, it appears that roughly one-quarter of the medicines distributed were atoles.  

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303 “Informe del Oidor Juez,” 40v.  
304 Hospital Real de Naturales, “Libro de botica en que se asientan las medicinas que se traen para este Hospital Real de los Naturales,” 1r-9v.
Figure 10: Plan of the first floor of the Hospital Real de Naturales, 1764. "A" marks the central patio that Arroyo reimagined as a space for anatomical dissections. "B" indicates the area rebuilt to support the temascal and the placer baths. The main entrance was at the bottom, leading into a chamber of "heridos." At the top is the "campo santo" where the dead were buried. The areas in yellow were new additions by Arroyo in the early 1760s, extending the original standard square, courtyard model. Along the right flank runs one of the city's aqueducts, conveniently located to serve the increased water needs of the temascal, which Arroyo noted. Lorenzo Rodríguez, Plano inferior del Hospital Real de los Indios de Mexico, 1764, Paper, 1764, MP-Mexico, 2258, Archivo General de Indias.
Lest one doubt the degree to which these atoles were considered medicine by the nurses, the patients, or their preparers, it is worth noting that in the 16th century Francisco Hernández discovered that there were more types of medicinal atoles than he had the ability to record. He did recount the ingredients for many, a few examples being *nochil* atole, for invigorating the weak; *michihuauh* atole, for kidneys, the urinary tract and scabies; *yolatolli*, for those with too much blood; bitter atole, a purgative; and *yzquiatolli*, for weak hearts or an overabundance of melancholy. These descriptions confirm that already by the 1570s atoles were becoming syncretic medicines. Although the recipes might be pre-Hispanic, the descriptions of their uses that Hernández recorded from interviews with local curanderos and curanderas are clearly in the terms of European Hippocratic medicine.\(^\text{305}\) And surely the atoles served at the Royal Indian Hospital in the 1720s were even more so a hybrid product. However, it was clearly a hybrid medicine over which women of native descent had medical authority. Miscellaneous memos demanding payment for services make it clear that the preparers in the *atolería* were native women who were not infrequently the spouses of the infirm. Also, through at least the middle of the 18th century, the “*atholeras*” were a separate class of employee, each earning a thirty percent bonus over that of the head cook (8 pesos, 4 reales in 1750).\(^\text{306}\) There exists today no comparable medical records from the

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\(^\text{305}\) Hernández, *Quatro libros. De la naturaleza, y virtudes de las plantas, y animales, que estan receuidos en el uso de medicina en la Nueva España, y el metodo, y correccion, y preparacion que para administrarlas*, 132r-137r.

\(^\text{306}\) Joseph Cárdenas, “Libro de cargo y data” (1750), 19r, Colección Antigua 0499, BNAH. In 1787, the Hospital employed five atoleras, who were now named in the budget, albeit without surnames: María Manuela, Manuela Antonia, Alfonsa Antonia, Juana Isabél, and María Josepha. Still, atoleras earned
17th century, yet we can say that by the early 18th century native women specialist healers held a normalized medical role within the walls of the Royal Indian Hospital.  

The _atoleras_’ role within the hospital was underwritten by the fluid distinction between food and medicine within Hippocratic understandings of the body. As Rebecca Earle has shown, the notions that the body had a porous relationship with its surroundings and that both food and medicine had equivalent impacts on the body’s complexion were not merely matters of academic debate. Rather, how the New World and its climate and _comida_ would impact the Spanish body, and how Spanish food would improve the Indian body, were common concerns for settlers and viceroyals alike. Employing this theory, it was believed that the Indian’s body had become accustomed to its surroundings, and although these surroundings might be insalubrious, forcing radical shifts to the body’s complexion (composed of yellow bile, black bile, phlegm, and blood) could be fatal. Healing was a matter of restoring the balance of humors to their original, resting state; therefore it was an easy conclusion that the infirm should be treated with their own foods modified for their most healthful effects. Therefore, to the administration, the doctors, the friars, and the patients the _atoleras_’ presence within the hospital was acknowledged as necessary to the medical regime, but it was also simply unremarkable.

double the wages of female nurses. “Expediente sobre el cobro del medio real” (1787), 114r, Hospital Real de Naturales Vol. 27; Doc. 2, BNAH.

307 It is possible as well that some of the many types of balms, water-based concoctions, and cordials distributed in the hospital were prepared in the atoleria, especially considering the repeated complaints of insufficient provisions from the contracted pharmacist. The historical record, however, is not complete enough to fully arrive at a conclusion.

308 Earle, _The Body of the Conquistador_, 1–14.
The legal life of the temascal in colonial New Spain was similarly marked by Hippocratic theory. Curiously, during the colonial era temascales were never a focal concern of the Holy Office of the Inquisition. Although it is certain that Spaniards, negros, mestizos, and other castas visited the temascales, which would bring them under the eye of the Holy Office, they appear not to have raised much suspicion about witchcraft performed within. The well-known idolatry extirpators that condemned many indigenous and/or syncretic medical methods make no particular mention of the temascal as a heretical practice or a site for idolatry. In my own research, I have been unable to find a single significant implication of the temascal in the trials of the Inquisition. The principal historians of medicine and the Inquisition, such as Gonzalo Aguirre Beltrán, Noemí Quevedo, and Laura Lewis, similarly have found no specific interest in the temascal. What did concern colonial administrators, however, was the effects of the temascal upon the Indians’ constitution and morality.

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Figure 11: Plan of the second floor of the Hospital Real de Naturales, 1764. Lorenzo Rodríguez, Plano superior del Hospital Real de los Indios de Mexico, 1764, Paper, 1764, MP-Mexico, 225A, Archivo General de Indias.
The temascal had long gained the attention of medical and colonial authorities who argued over whether their use should be permitted or not. Despite the lack of concern about the temascal’s potential role in idolatry, the bath was feared as a threat to *policia*, that is good custom and moral bearing and particularly the sexual rectitude of the Indian. In terms of jurisdiction, this was mostly a concern for local parish priests and *cabildos* until 1688. In that year, however, local conflicts over the practice were appealed to the crown, and the king was forced to adjudicate on the temascal and its relation to “adultery, and other abominable vices, which are intrinsically evil, sinful, and offensive to God and the Republic.” The reigning theory was that the excessive sweat induced by the steam bath piqued animalesque sexual zeal, leading to a loss of reason and indulgence in group fornication, adultery and, mostly damningly, sodomy. At first King Charles II simply banned the bath. But the crown’s edict met stiff local resistance, and thus the viceroy Conde de Galve (1688-1696) polled some of Mexico City’s most respected physicians to weigh in, asking if the temascales are “useful, medicinal, co-natural, and alieving and consoling to Indians and other persons.”310 The steam bath, the two concurring doctors responded, was indeed beneficial to the Indian, and to prove their conclusion they cited Plato, Aristotle, Pliny, Hippocrates, and Galen. More, they wrote, the extensive use of heated baths by the firm warriors and soldiers of the Roman empire demonstrated that the temascal could “make men robust” and might even fortify the feeble, phlegmatic Indian. And furthermore, they elaborated, the use of the temascal had become over so many centuries an “ingrained custom,” so much so that the Indian body

had adapted to it and changed its nature to withstand extreme fluctuations in temperature with the aid of “closed pores.” Through time the custom became necessary to the Indian constitution, and outlawing it now would not only remove something beneficial, but would contribute to the further degradation of the Indian body.⁴¹¹

The king apparently saw the reasoning in this. The physicians’ medical advice reflected well the dominant understanding within the Spanish realms that race, culture, and climate mutually influenced each other. Although Jorge Cañizares-Esguerra has found that within early colonial New Spain incipient elements of 19th century “hard” scientific racism were present, the colonial caste system more commonly relied upon a combination of genealogical, historical, phenotypical, and cultural registers weighted heavily towards culture.⁴¹² Indianness, so to speak, could be as much about dialect, diet and dress as skin tone, hair type, and lineage. In learned texts of the 16th and 17th centuries, this was reflected in treatises and theories about how the Indian’s corporeal complexion was imbricated with custom. Changing the native’s behavior, her food, drink, sex habits, and ritual life would, in time, produce a new Indian body. Typically it was understood that the Indian would become less “phlegmatic,” moist, and apathetic with an infusion of “sanguine” Iberian customs. Therefore, when in December of 1691 the king declared that the temascal was “appropriate to the disposition of the Indians,” he was acknowledging the somatic consequences of culture. By the same logic he went on

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⁴¹¹ Silva Prada, 12, 23–24, 34–43, 48.

to insist that it is “most proper to our Zeal” to also respond to all “threats to public health,” and therefore he created a licensing system and limited the number of temascales in the city to twelve. This had nothing to do with the potential therapeutic or anti-therapeutic effects of steam. Quite to the contrary “public health” in the king’s usage solely denoted moral behavior — *policia* — and the public was healthiest when promiscuity was lowest. Healthier custom, healthier spirits, healthier bodies — they went together.

Charles II’s concerns about the temascal never went away, and the bath was for the rest of colonial period blessed with a reputation for licentiousness and promiscuity. The common, persistent complaint was of men and women or multiple people sharing the space, which could lend itself all kinds of ungodly pleasures. The viceroy Marque de Real Vista complained in 1725 that the temascal had “devolved into a bestiary,” because “late at night the people leave the pulquerías, their shops and stands” and overwhelm even the pious *temascalero*. Such charges were reiterated time and again in so many words until the end of the century. And therefore for the next hundred years licensed temascales were subject to random searches. Initially the draconian punishment for allowing sexual misconduct was 200 lashes and ten years of hard labor or ten years of exile to the Philippines; in 1725 however this was monetarized to 100 pesos for the first

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313 Charles II, “Baños temascales, trata la forma en que se permitirán” (December 12, 1691), Reales Cedulas Originales Vol. 24; Exp. 76, AGN.

314 Autos seguidos por la Real Cédula que prohibía el uso de temascales públicos y comunes por ser inmorales, y en la que se imponía que se recogieran y limitaran las licencias para tenerlos” (1706), 273r-276v, IV Consolado 1291-001, AGN.
offense, 200 for the second, and so on.\textsuperscript{315} Such fines promised ruin for the heedless
\emph{temascalero}.\textsuperscript{316}

Despite the poor reputation, the same cultural current that inspired broadsides and
manuals for all kinds of local curatives also sparked institutional interest in the steam
bath. Before the Royal Indian Hospital, the majordomo of the \emph{Colegio Mayor y Viejo de
Santa María de Todos los Santos} sought to install one for his pupils. Jacobo Mariana de
Vallarta wrote to the Audiencia in February of 1743 requesting special permission to
build an experimental temascal on school grounds. Emphasizing that his students were of
“virtue, letters, and Nobility,” he argued that the college would be an ideal laboratory for
testing and then disseminating the practice across the “Republic” and “Kingdom.”

Vallarta explained that his honorable students would be impartial observers, and that
because the \emph{Colegio} was centrally located near the Court of Justice, it would be easy to
surveil “not only the street-side exterior, but the interior” of the temascal as well. This
was especially important because “it is notorious the increased quantity” of people
utilizing such baths. Once the proper measures for regulating the baths were determined,
he proposed that the school’s students would disperse across the viceroyalty bringing
proper instruction. The Audiencia concurred. Several of its attorneys noted that the
proposal appealed to the “zeal of the justices” and endorsed the plan to devise best

\textsuperscript{315} “\textit{Autos seguidos por la Real Cédula que prohibía el uso de temascales públicos y comunes por ser
inmorales},” 42v, 273r-v.

\textsuperscript{316} It is difficult to deduce the caste identity of temascal owners in the licensing records. It appears that all
were small family businesses and the majority were owned by indigenous small urban landowners. However, the sector did have some diversity: in the first half of the 18th century a few operators were
women, some mestiza, and in at least one case the \textit{temascalero} was a Creole Spaniard. “\textit{Autos seguidos por la Real Cédula que prohibía el uso de temascales públicos y comunes por ser inmorales},” 1r-60r.
practices and replicate them. On July 8th of that year Judge Pedro Francisco Enriquez approved the idea.\textsuperscript{317}

The temascal at the Royal Indian Hospital followed these same trends of pursuing novel cures and of assuming control of social institutions. As to how it worked, the closest explanation came from Nicolás Torres and Joseph Dumont, the latter a peninsular and doctor at the Royal Indian Hospital. In a pamphlet published on the curative effects of “nature’s temascal” at the spring known as the Peñol,\textsuperscript{318} Dumont and his co-author explained the Peñol’s salts and “aero-elastic spirits” seeped into the body, where they augment the elasticity of the veins and thinned the humors, allowing circulation to increase. Travelling through the body, these “absorb and embed in themselves any noxious, acrid salts,” which are then expelled. The water was not only useful, but sometimes even necessary for rheumatism, gout, ciatica, hydropesia anasarca, hernias, broken bones, malformed bones, nervous debilities, firearm wounds, contusions and burns.\textsuperscript{319} Accordingly the hospital began making bi-monthly trips by canoe across Lake Texcoco to the hot spring.\textsuperscript{320} Nature’s temascal might have been ideal, but man’s

\begin{itemize}
\item \textsuperscript{317} Jacobo Mariana Vallarta, “Petición de don Jocobo Mariano de Vallarta, abogado y procurador del Colegio de Santa María de todos los Santos, para que se le conceda licencia a dicho colegio para construir baños de placer y temascales para el uso público en una de sus casas” (February 1743), 1r-8v, IV Real Audiencia 5171-019, AGN.
\item \textsuperscript{318} The term “nature’s temascal” came from doctor José Ignacio Bartolache’s periodical Mercurio volante, its usage, however, indicated that this was no neologism but a common understanding of the kinship of these therapeutics. Mercurio volante con noticias importantes i curiosas sobre varios asuntos de fisica i medicina (Mexico: D. Felipe de Zúñiga i Ontiveros, 1772), 53.
\item \textsuperscript{319} Joseph Dumont and Nicolás Joseph de Torres, Virtudes de las aguas del Peñol, reconocidas, y examinadas de orden de la Real Audiencia (Mexico: La Imprenta de la Bibliotheca Mexicana, 1762), 4, 16, 17.
\item \textsuperscript{320} Antonio Arroyo, “Cuenta y relación jurada de Cargo y data” (1784), 23r, Hospital Real de Naturales, BNAH.
\end{itemize}
temascal would do for regular application, using the steam to similarly quicken the body’s fluids.

Both nature’s and man’s temascales represented the hospital’s appropriation of the growing tide for novel and indigenous medicines to both extend its therapeutic control and to demonstrate its zeal for the public good. A few yards from it stood the hospital’s central patio, which Antonio de Arroyo reasoned was the perfect setting for public dissection hall, which the colony sorely needed. As he explained to the king when describing these additions, he was driven by “the desire that [the hospital] achieve the greatest benefit through its experiments, and the greatest respect for its authority.” The anatomy theater, he hoped, put the Creole hospital on equal footing with the Royal and General Hospital of Madrid, which likewise elevated its mission above succor to contribute to “that most precious treasury of man: health.” But beyond such high-mindedness Arroyo too had the colonial situation in mind. He insisted that it was well known that all major epidemics begin among the Indians because of the “disarray of their lives and thereby their burning nature.” From them, disease spread across the viceroyalty, attacking casta and Spaniard alike. By cutting open their corpses, it was hoped, this weak nature could be mastered, and the regular epidemics thus “expelled.” The same Joseph Dumont mentioned above had, upon migrating to New Spain from the peninsula, reputedly employed the latest anatomical knowledge to cure two incurable diseases specific to the Indian body, much to the chagrin of Creoles who lauded their

321 Antonio de Arroyo, “Copia de la representacion, que en 14 de Octubre de 1764, hize al Exmo. S[eñ]or Marqués de Cruillas, Virreyde este Reyno” (1764), WMS/Amer.135, Wellcome.

322 Antonio de Arroyo, “Testimonio de los autos hechos a represetación de Don Antonio de Arroyo sobre anatomías” (1763), 181v-184r, Hospital Real de Naturales Vol. 77; Doc. 5, BNAH.
long experience with the climate, temperaments and complexions of this country and its residents. This was the model for what the new Indian Hospital could be.

It took seven years for the anatomy theater to open, but the final product was beautiful. A ring of tapestries traced the perimeter of the theater, one of the Royal crest, flanked by the angels of Prudence, Justice, Courage, Temperance, and Misericordia, another of an anonymous “royal person [representing] the Imperial Court of Mexico,” and a third of the lady of anatomical wisdom, poised on a bureau, gazing out the window at Venus. Within these stood three rows of chairs and in the center a gorgeously crafted bronze table with an exhibition pedestal and a special chute where body parts were strewn into a subterranean “holy place.”\textsuperscript{323} We know not who the first dissectee was. Indeed, we know none of the names of the dismembered corpses, for that was the point. Advocating for the theater physicians Francisco Gonzalez and Juan Gregorio de Campos added that the Royal Indian Hospital was ideal because it “provided copious numbers of cadavers.”\textsuperscript{324} And these, which would become clear in a trial decades later, were not exactly subject to Catholic strictures against cutting apart the flesh where elements of the soul may reside.\textsuperscript{325} Violating a corpse before the soft tissues had disintegrated and the soul risen could bring one before the Holy Office of the Inquisition, but Indians, who were not under the Inquisition’s jurisdiction, were more easily overlooked.

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\textsuperscript{323} Antonio de Arroyo, “Noticia del estado y función del teatro de anatomía” (1772), Hospital Real de Naturales Vol. 79; Exp. 12, BNAH.

\textsuperscript{324} Arroyo, “Testimonio de los autos,” 185v.

\textsuperscript{325} “Expediente instruido contra Dn. José María Martínez relativo a la exhumación del cadáver de Dn. Guillermo de Aguirre” (1811), Hospital Real de Naturales Vol. 100; Exp. 38, BNAH.
The anatomy theater transformed the Royal Indian Hospital from a space of death into a premier site of research and medical training. Through Arroyo’s recommendation, anatomical training with the bodies of Indians became a requisite of a medical education, and the hospital soon established a Catedría de anatomía, or chair of anatomy as it was integrated into the Royal and Pontifical University as the School of Anatomy. This all had the king’s backing, for Charles III was intent on cultivating a generation of capable colonial surgeons for the many new military and navy hospitals serving the many frontiers of territory and war. Taken by Arroyo’s argument but wary of his capacity, King Charles III appointed navy surgeons Manuel Antonio Morelos and Andrés de Montaner y Virgili to direct and chair the anatomy theater, because Creoles are “still infants in regards to the practical science” and “modern medicine” and could use an infusion of zeal. This sparked decades of dispute over wages, prestige, and rights that long outlived Arroyo. Nonetheless, Arroyo’s vision of transforming the hospital into a laboratory -- not a closed lab, but one open to the public, with regular dissections advertised in the Gazeta and available to all -- was realized.

This was just the start. As we will see in the following chapters, the Royal Indian Hospital subsequently also became one of many sites used to test the virtues and efficacy of supposedly Indian cures discovered across Meso- and North America. It was formally integrated with the more prestigious Hospital de San Andrés and the Royal and Pontifical University to serve as part of a research complex working to avail the medical mysteries of the New World. But that was yet to come.

326 “Testimonio de los capítulos y representaciones de Don Andrés de Montaner y Vigili sobre la Cátedra de Anatomía del Hospital Real de Indios” (1772), 68r, Hospitales Vol. 47; Exp. 5, AGN.
Conclusion

To conclude, the integration of the temascal and the placer baths into the Royal Indian Hospital was part of the culmination of decades of struggle for secular control not only of this hospital in particular, but of the mandate for public health more widely. As I believe is now clear, until the transformations of the mid-eighteenth century, public health was not part of the physician’s role nor, excepting during epidemic outbreaks, was the state particularly involved. Rather, the regular religious orders took responsibility to bring succor and the salvation to the furthest frontiers and the lowest urban barrios. Examining the struggle for control of the Royal Indian Hospital, two matters are of interest in regards to the “modernization” and secularization of public health. First is that this process began long before the Bourbon reforms of Charles III and clearly at the instigation of Creole colonials. This was effected less through the diffusion of ideas from Europe than through the shifting ideals of zeal and its public role. Second, as this process developed in tandem with the opening of a public sphere within the colony, doctors found themselves with new challenges and opportunities. By the end of the century, these scorned professionals elevated themselves to the rank of public intellectuals through expressing and enacting their zeal for public health and the common good. The changing marketplace for medicine however also pressured them towards change. In Hapsburg times, the profession had little incentive for innovation because of their lock on the highest strata of the medical market, which was protected and

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327 This concurs with Martha Few’s finding that health reforms in Guatemala were spearheaded by Creoles before royal initiative was taken. *For All of Humanity*, chapter 4.
guaranteed above all by the supposed purity of their blood. With the increased circulation of texts in the 18th century however, the profession was pressured towards engaging with a market that trafficked in novel cures for old diseases. As will be explored in the following chapters, in the last quarter of the century this developed into a zeal for medicines of supposedly indigenous origins and selling the Aztec fetish.

At the Royal Indian Hospital, this turn first emerged with the installation of the temascal and placer baths, which themselves were part of a larger revision of the hospital for the age of public health. As I have tried to show above, the baths were mostly a measure of social control over the lives of the patients; however, they were also an engagement with the new market and a redrafting of the hospital as a space and place within the colonial capital. Antonio de Arroyo saw the hospital no longer as a cloistered space, but instead a laboratory and a forum. The patients and staff of the hospital had long paraded through the city on holidays as living proof of the king’s catholic zeal for charity; but now they were not merely the beneficiates of mercy. Instead, as passive objects they and their bodies could contribute to the doctors’ heroic mandate and could serve the public good.

Moreover, as we will see in the next two chapters, in the Spanish imagination Indians – that is, the hypothetical Indian – had still more to contribute to humanity: not only would they be the object of reform, but they might just be the most crucial source of reformist agency. First in Mexico City (chapter 4), and then in Toluca, Michoacán, and Sonora (chapter 5) we will see how these Spaniards sought to recover and mobilize hallowed Indian knowledge of medicine and nature in service to “society.” Yet, despite the Spaniards’ “active and effective zeal for everything that contributes to public health,”
the actual agency of actual Amerindians was seldom taken into account, resulting in tense negotiations, costly rewards, and lost knowledge.\textsuperscript{328}

\textsuperscript{328} “Hospital de San Andrés: experimentos con carne de lagartija,” unpaginated.
Chapter 4: Ancient Knowledge, Earthly Salvation

Providence has always ensured to sustain and conserve Humanity, [and] has planted abundant treasures in our America, offering us within the three Kingdoms of vegetable, animal, and mineral the most plenteous resources with which to remedy the afflictions of nature, although with the discretion that many of these are apportioned to the Savages of the Mountains, who by their seclusion and indigence find themselves incapable of taking advantage of civilized customs, those used by cultured People of delicate taste.

Protomédico Manuel Venegas, 1788

Let us begin with the story of Don Juan de Luna, a respected elder citizen of the City of Mexico, who in 1782 nearly choked on a lagartija, a lizard, when he ate it to ease the throbbing tumor on his upper lip. The details are foggy, but he likely followed the protocol established by his medical counsel, the celebrated physicist, archeologist, and mathematician Antonio de León y Gama. If so, he hired indigenous residents to catch the creature, as Indians were known to effectively distinguish the venomous animals (Acaltepeyotl, in Nahuatl) from their “innocent” counterparts (Cuetzpalin). Only about a third of the known local lizard types were thought poisonous, so the odds were on de

329 Compendio de la medicina: o medicina practica, unpaginated frontmatter.
Luna’s side. He probably hoped that the lizard was a *tapayaxin*, as Spaniards believed this to be the most medicinal variety. He was, it seems, quite sure that he had the right kind of lizard; perhaps his confidence came from performing the trusted test of squeezing the animal’s head, which—if really an innocuous *tapayaxin*—would squirt a thimbleful of blood two or three paces. An anatomical inspection was in order as well, for León y Gama warned that the females were untrustworthy and could secrete poison even when the variety was known to be benign. Best to stick to the males. De Luna also probably hoped that the critter had not become too excited during its capture, transport, and imprisonment—all of which could upset the “animal spirits” and disperse its “volatile salts”—before preparing his simple remedy.330

De Luna took his lizard neat. León y Gama advised his Spanish patients who recoiled out of “horror, revulsion, or plain weakness” to mix the flesh with breadcrumbs and mold it into a pill. But de Luna knew well the underlying subtext that pervaded Spanish society in the colonies: there was nothing so embarrassing, so dishonorable to a Spanish male than to be bested by an “Indian” in fulfilling the ideals of manhood. Masculinity had been a cornerstone of Spanish theories of racial superiority since the conquest, so despite discomfort, de Luna would preserve his pride and “man up.” He skinned the lizard, then sliced off its feet and head and tore out the viscera, tossing them to the cat, which probably found its share more appetizing than the man his. Straight up and raw, de Luna slid the slimy, boney carcass down his throat. This was not his first. De Luna had been taking them for days and, sure enough, he was certain that his tongue was

feeling a little better. Perhaps with a few more, the whole business would be over and the tumor would go back to wherever it came.

Immediately after swallowing the lagartija, terror struck. Looking over, he watched the cat licking the last lizard guts from its lips, but then instead of picking a choice spot in the sun, it started writhing in pain. For a moment de Luna was dumbstruck; then, like lightning, it all snapped together: dying cat, lizard viscera, lizard body, human consumption. In a panic his eyes flashed to the nasty glass tank he used as a terrarium and there, crawling along the edge, was a beautiful but poisonous emerald green blister beetle. Of course, the lizard had nothing else to eat and was feasting on noxious blister beetles! His stomach sank, and he could feel it curling up like the cat. With but moments to save his own life, he ran to the cabinet and downed a purgative. Almost immediately, de Luna proceeded to vomit up the lizard that he had hoped would alleviate his pain, not take his life. In any case, the next day, in council with León y Gama, who was quite interested in what medicinal lizards might do for “the Patria” (homeland), de Luna relayed everything that had happened. Wisely, no doubt, but in a practiced, playful, modern manner, Leon y Gama intoned: Don de Luna, “you owe your life to that cat.” Luckily for de Luna, the cat was already dead, the debt canceled. 331

Beginning with this affair of the lagartijas, this chapter claims that New Spain witnessed an emerging vogue for “Indian medicines” in the final third of the 18th century. The lagartijas dominated the public sphere in Mexico City for the year of 1782,

but this was only the opening salvo of what became nearly a half-century of efforts on the part of the ruling elite to take control of the forms of medical syncretism they witnessed around them. Many enterprising physicians ceased to defend the market value of medical orthodoxy; instead, they aspired to command the processes of syncretism, and with their measure and reason protect society from wonton, unruly medical miscegenation. But this was also about more than strategies of professionalization.

The vogue for “Indian medicine” reveals a broad and radical transformation in the ideological place of “Indios” within the colony, one that prefigured subsequent, national conceptions. Since the conquest, Indios were (in theory) wards of the king and the church: they were insufficiently developed humans requiring paternalist protections, guidance, and discipline. This sense of indigeneity persisted through Independence; however, added to it, elites were beginning to conceive of Indians as members of “society.” On the one hand, Indians were now a target for social reforms aimed at optimizing the population. But they also were (again, in theory) part of society’s capacity for collective action – its agency or mobilization. In this chapter, I argue that this was a critical element of the emerging idea of independent Mexico. Creole and Spanish elites in the colony were forging ideas about what New Spain created and gave to a globalized world. As they conceived of a special purpose for this patria – to provide the world with the antidotes to man’s worst bodily woes -- they obligated Indios to provide the unique, autochthonous ingredient. It was in this way that Creoles imagined themselves as bound up with Indians in a shared “society” and a collective project.

332 In contrast to prior (and concurrent) reforms aimed at spiritual and behavioral improvement.
Through the above argument, I aim to illustrate an alternative to *identity* as our primary tool for explaining the origin of the idea of national independence. The scholarship on identity is now extensive and historians easily find traces of American identity, or “Creole Patriotism,” all the way back to the conquistadors.\(^{333}\) In recent decades, however, as historians have become more attuned to the contingencies and concatenations of the movements for independence,\(^{334}\) identity has likewise fragmented and become more ephemeral. Recent works have also shown that insofar as eighteenth-century Creoles exhibited patriotism for their colonies, this was but one sense of affiliation buried among many, including professional identities, class and caste status, gender, the global republic of letters and science, Spanishness, and region.\(^{335}\) Further, the “*Perú,*” “*México,*” “*Nueva España,*” et cetera of Creole attachment typically looked very little like the bounded population and territory of a nation-state. In short, the forms of patriotic identity expressed in the century before independence – usually celebrating the virtues of a select group of learned men – appear insufficient to support the *nation-thinking* that independence entailed. As scholarship has succeeded at dispelling teleological narratives of national becoming, identity has lost its power of explanation. It may be time to look for other modes of exegesis.

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334 Most notably in the works of Jaime Rodríguez O. *The Independence of Spanish America*; “*We Are Now the True Spaniards*”: Sovereignty, Revolution, Independence, and the Emergence of the Federal Republic of Mexico, 1808-1824.

Just because Creoles did not see themselves as achieving a nation does not mean independence was a surprise birth. Creole ideas about society did antedate Joseph Bonaparte’s usurpation of the throne and exhibited precisely the kind of nation-thinking that would shape the national era. In this sense, this chapter concurs with those scholars who argue that deeper social and cultural transformations laid important groundwork even if ultimately the wars of independence were not ideologically driven. Yet this need not indicate a teleological development towards modernity, as François-Xavier Guerra suggests. Nor does it require that we credit the Enlightenment for inspiring new political sensibilities and American identity. The Enlightenment, we know, moved in many directions and was full of vicissitudes. What particularly caught the Creole imagination was the idea of a productive population – that the true wealth of the empire lay with its people. This notion was simultaneously informing the Bourbon reforms: both crown and Creole queried how the population – that is, a society – acts and produces as a unified entity. This collectivity cut across the boundaries of caste, the cleavage between bureaucracies (the República de Indios and República de españoles), and fine distinctions of corporate privileges to constitute a unified population.

Attending to collective action instead of collective identity helps us out of one of the conundrums of historiography. One of the persistent problems with identity is that Creoles never expressed any kind of earnest solidarity with indigenous Mesoamericans or castas. Legends of the great Aztec lords could inspire reverence, but this did not extend

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336 Guerra, Modernidad e independencias: Ensayos sobre las revoluciones hispánicas; Lynch, Latin America between Colony and Nation.

337 See, for instance, the influential work of Conde Pedro Rodríguez Campomanes. Campomanes, Discurso sobre el fomento de la industria popular.
to living *Indios*. The scholarship is quite strong that the 18th century was a period of hardening commitment to caste identities and incipient senses of scientific racism. Nonetheless, an influential slice of the elite did see themselves as jointly part of the same society as *Indios*. But equality was not part of society; this word neither denoted nor connoted “horizontal kinship,” as Benedict Anderson so influentially defined national identity. Society was not so much about identity at all as it was about mobilization. Creole believed that Indians’ esoteric knowledge constituted New Spain’s secret weapon. This was not a weapon against nations, but one against death – a positive implement “for the good of humanity” – and Creole intellectuals were the vehicle. In their minds, they were not equals – they did not identify with Indians – but the project of revealing Mexico’s greatest treasure to the world ideologically linked them in the project that would become Mexico.

* * *

If we are to believe the alarms raised by Mexico City’s elite physicians and officials, there was an all-out run on lizards, apparently with little regard for the diversity of species or the dangers of venomous misidentifications. Dr. Alonso Carriola, first class surgeon of the Armada, lamented, “I had assumed with good reason that this discovery would inspire many who suffer [cancer] to try them. And this is what happened. Being that the recipe came out in fancy print and all glittery, who could resist?” De Luna’s

338 Anderson, *Imagined Communities*.

339 Manuel Antonio Moreno and Alejo Ramón Sánchez, *Carta apologética de las reflexiones sobre el uso de las lagartijas* (México: La impr. del br. D.J.A. de Hogal, 1782), xix.
friend, Antonio de León y Gama, warned that, the public “has begun to prescribe them to themselves, for every kind of illness, indiscriminately eating any kind of lizard, throwing caution to the wind...”\textsuperscript{340} De Luna aside, the reports were mostly inspiring. Friar Ignacio Anelo ate fifteen lizards to much relief for tongue cancer; in the Convent of the Conception a live lizard, split open, was applied to the chest of a young girl suffering lung problems and she was healed; and “an Indian woman” was even cured of leprosy by eating merely three.

Supposedly, the whole affair of the *lagartijas* began with José Ferrer, a Catalan dying of cancer in Guatemala City. By 1781, the tumor on his upper-right lip had progressed to its final stage and the physicians had done no more than dispel his hopes. He had “resigned himself to death, and retired to the Church of the Candelaria to consult Father Don José de Eloso regarding his salvation,” without knowledge that “in this priest Providence had deposited the opportune medicine.” Father de Eloso, realizing there was nothing to lose, recounted to Ferrer a remedy he had witnessed while serving as parish priest in San Juan de Amatitlán. He had been informed of a young native woman collecting alms to support her husband. So the priest found the man and demanded he explain his destitution, at which the husband lifted his shirt showing extensive wounds from *mal de bubos* (syphilis). It was evident he could not work, and therefore Father de Eloso dispatched “the little Indian” to the Royal Indian Hospital to be treated with the usual mercury cocktail. But the town council objected, explaining this was unnecessary for there was a local efficient cure for bubos. Although suspicious, the priest acquiesced,

\textsuperscript{340} León y Gama, *Instruccion sobre el remedio de las lagartijas*, frontmatter.
so he said, for no other reason than to witness the treatment. When the husband returned completely cured a few days later, the priest demanded that the town council divulge the recipe and was informed that it was nothing more than eating the local lizards raw.

Later, Father de Eloso explained to Ferrer that because both bubos and cancer are maladies of “a cutaneous nature” it was worth a try. The priest had three lagartijas brought from Amatitlán and Ferrer choked them down like oysters. In five days a copious sweat began followed by a “thick, yellow abundant ooze” from the tumor. With boosted confidence, Ferrer polished off five more. Now the flesh started to heal until he regained his “natural figure.” Hearing of the remarkable recovery, Ferrer’s physician, José Flores, recorded the recipe. Once he was certain he had it precisely as the residents of Amatitlán applied it, he ran a brief report to a local printing house. Soon, a small booklet of fifteen pages was available in Guatemala City free of charge, “at the expense of patriotic spirit” and “out of the desire for your well-being [dear reader], and that of all.”

Almost immediately this pamphlet was circulating in Mexico City and elsewhere in New Spain where “the rapid and happy success that is experienced” inspired action by the colonial government. The Royal Tribunal of the Protomedicato – which was responsible for regulating the colony’s pharmacopeia – had first jurisdiction over the matter. With little interest for disrupting the staid alexifarmacia (standard pharmacopeia), the Protomedicato eschewed swift action. But seeing this as a pressing opportunity, the city’s leaders in the cabildo took it upon themselves to investigate the

341 Joseph Flores, “Específico nuevamente descubierto en el Reyno de Goatemala, para la curación radical del horrible mal de cancro, y otros más frecuentes” (1782), Novohispano: Bandos: 12: 5, AGN.
matter, inspired, as they wrote the viceroy, by their “zeal” for “the public good, the object to which Your Mercy directs his attention.”

Beginning in June of 1782, Felipe Teruel conducted parallel tests using local lizards and then sought to enlarge the trial by (unsuccessfully) recruiting city governments from Chihuahua to Oaxaca to organize their own tests. Seeing that they had been scooped, doctors José Giral Matienzo and Joseph Ignacio García Jove of the Protomedicato scrambled together their own crackshot commission. Altogether, thirteen doctors, surgeons, and pharmacists conducted trials on patients with leprosy, syphilis, cancer, and other illnesses manifest in the skin. However, when these failed to find consensus in a joint council on September 4th of 1782 on whether lizards were safe or effective, they quickly brought the matter to the public sphere.

Into the following year a rancorous pamphlet war ensued. Representatives of the cabildo, led by Antonio de León y Gama (1735-1802), professor of mathematics at the Royal and Pontifical University and a widely respected polymath willing to trespass into any discipline, celebrated the lives to be saved and the glory to shine on New Spain. The king’s representatives at the Protomedicato warned of an ignorant public poisoning themselves with the “toxic salts” of such a low order of animal. It was the former position, however, espoused by Creole intellectuals, that marks a more unusual intellectual departure. It was the opening salvo of what would become a half-century quest to recover “Indian medicine” and which had deep resonance in cultural and public

342 This paragraph and the following one are mostly paraphrased from Miruna Achim’s book on the subject. For a detailed description of this series of events, see, Miruna Achim, *Lagartijas medicinales: Remedios americanos y debates científicos en la Ilustración* (Mexico City: Conaculta, 2008), 29–61. This quote is from page 31.
life of independent Mexico. Now we turn to the vicissitudes and poetics of their new theory of Indian knowledge.

“First find out what the Indians call it”

The Creole position leaned on a new and optimistic history of the Indians, the Mexica (Aztec) in particular. Language, what it is and what it means, was in their minds the principal reconstructive tool for discerning the Indian past. But this was more than a nostalgic exercise: it was an epistemology, and an enlightened one at that. Linguistic reconstruction was, in the Creole imagination (or at least that of the leading intellectuals), a scientific method of natural history. By reconstructing language, one could recover the Indian past while at the same time attaining the truths of nature, thereby redeeming the patria, the empire, and humankind all at the same time.

As was believed long before the Enlightenment, for Spaniards, God was “the Author of the Earth’s Nature” and His book was overall a balanced and benevolent one. For each disease that ravaged the human body, God also “created the medicines for these illnesses out of this same earth.” The lagartija was just one such: “a remedy of which we have been ignorant for so many centuries, for a so incurable and rebellious disease [i.e. cancer].”343 In this sense, the discovery of medicinal knowledge was imagined not as the creation of something new, but rather the recuperation of something lost: the perfect and innate knowledge that Eve had shattered with the godforsaken apple. With original sin,

343 León y Gama, *Instruccion sobre el remedio de las lagartijas*, 59.
man had lost fluency in the signs of nature; the language of the earth’s Author became babble in human ears.

The lizard was just one more reminder of man’s hubris, his blindness to the secret languages of God and nature.

O for so many centuries has this Monarchy of light shown us the Lagartijas, an animal so common worldwide (perhaps because Nature never leaves out anything that is necessary), skittering across the ground, scaling old walls, living among boulders, despised by most, being a joke among the spiteful to call each other lizard-killers; all without the countless learned men — who have abounded in the field of medicine since time immemorial — stopping for a moment to view [the lizard’s] mechanisms, to contemplate the secrets of this despised animal that embodies that which is Great within something so small; [learned men] who never undertook the enigma, never understood the Hieroglyphics and mediums that are the oracles through which nature teaches.344

In his endorsement, Joseph Giral Matienzo, First Chair of Medicine at the Royal and Pontifical University, hoped that humility could once again reveal the awesomeness and power of Creation.

The key was the reconstitution of language, the Adamic language, the perfect language by which nature was first named: “Now out of the ground the Lord God had formed every beast of the field and every bird of the heavens and brought them to the man to see what he would call them. And whatever the man called every living creature, that was its name.”345 Such language was not merely a pragmatic technology, that is, a system of signifier and signified supporting for imperfect communication. Rather, in the Adamic language, the object and its sign were one and the same. The name did not represent the object; it was the symbolic manifestation of the thing itself. Like DNA, the

344 José Vicente García de la Vega, Discurso critico que sobre el uso de las lagartijas, como especifico contra muchas enfermedades (México: F. de Zuñiga y Ontiveros, 1782), prefatory comments.
345 Genesis 2:19
name represented perfectly everything that the object was. This, however, was lost with Babel. “That is why it was called Babel—because there the **LORD** confused the language of the whole world. From there the **LORD** scattered them over the face of the whole earth.”

What Leon y Gama, Matienzo, and other Creole intellectuals supposed was that the true knowledge inscribed in the original Adamic language was not entirely lost, but rather persisted, fragmented among the world’s languages. Noah, apparently, assembled much of this knowledge as the steward of nature, but once again, after the Flood receded, words were cast to the wind. Each of the myriad world languages contained within it some gold flecks of this knowledge. Stored for centuries, now proper linguistic study was the path to true medicine:

Surely is to be believed that the Indians derive from their language, like other peoples, knowledge of this medicine, for being that it is certain that Noah relayed to posterity sufficient instruction in the sciences and arts, which he possessed to high refinement, it follows that our **naturales** [Indians] preserve this precious tradition, and brought together with that of other peoples, this would enable their extension.

With a global empire, no one better than the Spanish could hope to assemble, collate, cross-reference, and distil the world’s languages – to piece together linguistically the original knowledge of nature and, thereby, appropriate the balances and counterbalances that God wrote into nature. José García de la Vega, professor of medicine, cited that in the classic herbals, the lizard “‘is called in Greek **Zayra**, in Latin **lacerta**, in Castellano **Lagartija**, and Cervantes called it **Lagartezna**, in Italian **Lacertola**, in French **le zard**, in

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346 Genesis 11:9
347 García de la Vega, *Discurso crítico que sobre el uso de las lagartijas*, 2.
Tudezco Eydechs,” and now I add, in Mexican, *Quetzpale*, in Otomí, *Sandaga*.”

Nahuatl and Otomí too, insisted García, were scientific languages.

But the work facing the medical researcher was as much ethnological as archeological. Among the “Chichimeca,” or “bárbaros,” on the frontiers of civilization this knowledge still survived, so they believed. Not necessarily in the conscious minds of wild men and women – although this could be the case – but more likely, preserved unconsciously in their vernacular tongues. In the natural state of the frontier, language was less degraded and more original. Lamented León y Gama: “Even today, there are memories of this Medicine, and Botanica among the Indians of the villages quite distant from the Cities, where our doctors never will hear of it: skunk meat… [and] a bird named Aura, are anti-venereal remedies. Among plants… Zorrillo, guayacan, zarza parrilla, called by the Mexicans Mecapatli; Quacihuitzpatli… What virtues might other plants and animals known to the *Indios* have, and which they have not wanted to tell us?”

But while reconnaissance would suffice to rake in the wisdom of all those peoples still living in heathen adolescence, as Spaniards thought of it, the truly great stores of knowledge were now dead and bygone. “Among the disgraces that the Indians’ herbal medicine has suffered,” bemoaned León y Gama, is that Spaniards have bastardized and mangled “the natural names” of the plants. “The wanton way that the names of the things of this Kingdom [of New Spain] were dismissed, is the reason why we now lack innumerable remedies, which only the Indians who yet know the old nomenclature

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\[349\] *Instruccin sobre el remedio de las lagartijas*, 3.
benefit from.”\footnote{350} These Indians, though, were few for “Indians today… do not inherit their language whole” from their ancestors.\footnote{351} And therefore, while the Indians once had “effective and ready medicines for any diseases that they suffered in New Spain… Now so much is forgotten, that there remains but a few traces (reliquias) of [the true knowledge] among three or four of the herb sellers, who sell it dried and [thus] with little of the substance and but altered virtues compared to the herbs known of old.”\footnote{352}

Spaniards – these authors were saying – have only themselves to blame, first for original sin, and second for crass, unenlightened imperialism.

Recourse, thought these Creoles, could be had by tapping the knowledge of the \textit{bárbaros} of the frontier, but in this case they preferred to look to the ancient past. In part, this was surely simply a matter of intellectual dominion: to them, history belonged to the intellectual elite. They were comfortable speaking about the past and were partial to their armchairs. But also, the Aztec empire represented to them not only excellent knowledge of nature, but the use of such knowledge in the service of good governance and technocratic benevolence. The legend of Moctezuma’s gardens persisted and was a common reference. The oft-republished and translated history of the conquest by Antonio de Solís recounted it thus:

\begin{quote}
[Moctezuma] took a particular Care to transplant into his Gardens all the choice Simples, that benign Climate produc’d, where the only Study of the Physicians was to attain to the Knowledge of their Names and Properties. They had herbs for all Kinds of Pains and Infirmities, and in the Juices and Application of those Herbs consisted all their Remedies, and with which they effected surprizing Cures, having by long Experience found out their Virtues, which, without distinguishing the Cause of the Distemper, they ally’d to the Patient’s great
\end{quote}

\footnote{350} 5.

\footnote{351} García de la Vega, \textit{Discurso critico que sobre el uso de las lagartijas}, 5.

\footnote{352} \textit{Instruccion sobre el remedio de las lagartijas}, 3.
Benefit and Recovery. The King freely distributed to all who had occasion for them such of his Simples as were prescrib’d by the Physicians, or desir’d by the Sick; and was wont to inquire if the Patient had receiv’d any Benefit therefrom, either gratifying a sort of Vanity he had in the successful Operation of his Medicines, or believing that he fulfill’d the Obligation of a Sovereign, in taking such Care of the Health of his Vassals.  

It was not only Aztec pharmacological knowledge they wanted; they also wanted Moctezuma’s virtues to reflect on their profession and its dedication to the good of the public.

Their project, therefore, was to recover and reconstruct lost languages. It was at this time, hence, that the 16th century physician Francisco Hernández’s masterwork, *De materia medica Novae Hispaniae* (1651) became the bible of Mexican nature. Hernández had travelled through southern New Spain from 1570 to 1577 with a mandate from King Phillip II to “consult… all the doctors, medicine men, herbalists, Indians and other persons with knowledge” and document the medical resources of the viceroyalty. For reasons financial and political, his monumental research failed to become the touchstone it deserved to be. But in the mid-eighteenth century, Spanish naturalists found that it could serve as their conduit to the ancient past. His method matched perfectly their intentions. In the 1570s Hernández explained that the Mesoamerican names of plants and animals are not “random or purposeless”; instead they always reflect important geographic, morphological and medicinal properties that are vital to the researcher, and can be cross-referenced to describe the plants various characteristics. For example, “Tlahuelilocaquáhuitl, [is] called lunatic tree [*árbol de la locura*] because it

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353 This translation is from the Dublin edition: Antonio de Solís, *The History of the Conquest of Mexico by the Spaniards: Done into English from the Original Spanish of Don Antonio de Solis, Secretary and Historiographer to His Catholick Majesty.*, trans. Thomas Townsend (Dublin: S. Powell, for G. Risk, G. Ewing and W. Smith, 1727), 432.
cures the possessed, expelling demons and arresting their curses... the tetlatia [is] called urine medicine because it is hot to the fourth degree and is of a burning nature... [or] the qualancapatli [is] called medicine of the airy man, because it provokes laughter and placates ire.”

Hernández explained that the Nahuatl names denote the shapes of plants, the places where they grow, how to identify the active parts of the plant, and other notable characteristics that aid identification, such as leaf patterns, flower shapes, and root patterns. Though no one language or regional dialect could be as perfect as the Adamic language, each captured a piece of the picture and suggested different medical uses of a species. Hernández’s method, then, was to “go from place to place” to collect names and thereby “obtain true information about these plants.”

For this reason, when the viceroy Revilla Gigedo appointed as chief advisors Don Felipe Antonio Teruel and Antonio de León y Gama to determine, “If there would be in this Kingdom [a lizard] of equal virtue as those of Guatemala?” León y Gama first turned to the 200 year-old research of Francisco Hernández and perused the 16th century historical and ethnographic works of Francisco López de Gomara (1551) and Juan de Torquemada (1615). “The ancient Histories of the Indians assure us that in the time of their gentility, they ate various insects, among them the Lagartijas,” León y Gama reported in order to inspire hope that the domestic species were “virtuous.”

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354 Hernández was an astute researcher, and his understanding and translation of the Nahuatl language was correct and accurate.


356 Instruccio sobre el remedio de las lagartijas, prefatory comments.

357 2.
Hernández he gleaned that there were sixteen species of lizards in New Spain, which the Aztec had usefully categorized as venomous, benign, aquatic, terrestrial, and amphibious. Methodologically, clinical trials could be directed and focused by first cross-referencing the knowledge of the “wild Indians” of Guatemala with that of the ancient Aztec. Thereby León y Gama aimed his sights on the Tapayaxin, because, although Hernández did not mention cancer, the diseases he did speak of – scrofula, leprosy, “mal aphrodisiaco” (syphilis) – “are so analogous to cancer” that it was worth trying.

358 In 16th and 17th century writings, and persisting through the lagartijas affair, the category of lizard could include salamanders and newts. Lizards were also regularly referred to as insects, as were crustaceans.

359 Instrucción sobre el remedio de las lagartijas, 17.

The more prudent and prudish minds of the enlightenment, while not unconcerned about syphilis, were tepid about finding the cure for it in their patria. It had been assumed by many since the “French disease” first appeared in Europe that its remedy would be present in the flora of the Americas, on the grounds that nature is balanced, and each virtue and poison has its counterpart, an antidote. Gonzalo Fernández de Oviedo in 1535: “because syphilis is common in this region, divine mercy would place there the method to cure this scourge.” This association of venereal diseases with the nature of the Americas, however, was long used to describe the Western Hemisphere as inherently degenerate and prurient. In the 18th century, Creole intellectuals were still trying to defend the nature of their patria from the low opinion of Continental intellectuals, now the prime villain being the most illustrious naturalist of Europe, Georges-Louis Leclerc, the Comte de Buffon. His comments on the inferiority of the Americas inspired (to the north) Thomas Jefferson to rhapsody on the admirable sizes of the moose and the mammoth, and (to the south) Spaniards in Rio de la Plata to distress at the embarrassment of finding their region the former home of the slovenly, freakish giant sloth.

Creoles in New Spain, instead, sought the moral high ground. First was to convert the lagartija into primarily a cancer cure: “a remedy of which we have been ignorant for so many centuries, for a so incurable and rebellious disease.” In this way, the Americas were solving what Europe could not. But also, León y Gama made sure his readers understood that the lagartija was anti-venereal. Perhaps to distract naturalists from the great number of Nahua remedies (including lizards) in Hernández’s works that “awaken the venereal appetite,” he reported that in Europe dead, gutted, salted lizards are imported to make the “Venetian triaca... used to excite the Venus of the old and cold.” This would be a true venereal remedy. In New Spain and Guatemala, however, the virtues of lizards are not perverted to vice, but used to resolve the damage of sin. This distinction was iterated again by Francisco Balmis in 1794 while reporting on the local use of maguey and begonias in curing syphilis.

Fernández de Oviedo y Valdés, Historia general y natural de las Indias, islas y tierra-firme del mar océano (1535), 363; León y Gama, Instrucción sobre el remedio de las lagartijas, 31–32; Francisco X. Balmis, Demonstración de las eficaces virtudes nuevamente descubiertas en los raíces de dos plantas (Madrid, 1794), 298; Hernández, Quatro libros. De la naturaleza, y virtudes de las plantas, y animales, que estan
Language and Empire

Language – its administration, discipline, refinement, surveillance, standardization, appropriation, translation, and suppression – had been part of Spanish imperialism from the beginning. Nonetheless, the renewed attention to “what the Indians call it” in the 1780s was something new, reflecting enlightenment sensibilities and professional priorities. However, the theory of language circulating New Spain was also quite distinct from the emerging north European discipline of philology that would soon inform “Orientalism.” More than an ethnological tool of hegemony, New Spain’s linguistic praxis was a methodology of natural history, pharmacology, and, ultimately, the advancement of natural science for the benefit of humankind.

Since Malintzin (“la Malinche”) made her remarkable rise from slave to translator for the most powerful man in New Spain, Hernán Cortés, the role of language in the Spanish empire wavered between impulses towards supplanting and suppressing, or governing and appropriating, the native dialects. The mendicant orders (Franciscans, Dominicans, Mercedarians, Jesuits, etc.) dedicated themselves immediately to the work of devising grammars and word books to convert God’s Word into passable Nahuatl, Otomi, Zapotec, and many other Mesoamerican languages. Their writings present innumerable remarks on the bewildering linguistic diversity of New Spain, and in response, the first generations of missionaries dedicated themselves steadfastly to linguistic study, such that it became nearly standard that every missionary would have a

receuidos en el vso de medicina en la Nueva España, y el metodo, y coreccion , y preparacion que para administrarlas, 179r; Lee Alan Dugatkin, Mr. Jefferson and the Giant Moose: Natural History in Early America (Chicago ; London: University Of Chicago Press, 2009); Pimentel, The Rhinoceros and the Megatherium.
lexicon in progress. Among scholars today, this standardization of usage and application of European grammar to Amerindian tongues has become a paradigmatic example of cultural imperialism. The crown, conversely, demanded that for reasons of statecraft all native subjects must be taught Castilian – a uniform language for a global empire.\(^{360}\) Missionaries in general ignored this mandate both on pragmatic grounds and also because native languages and native speech were believed to be particularly dangerous and therefore could not simply be spurned and tarred over. They understood that since Noah’s flood 4,200 years prior, Lucifer reigned alone over the Western Hemisphere and in these millennia he had perverted men’s minds with contortions and inversions of truth. “But since the prince of darkness is the teacher of all the heathen, it is no new thing to find cruelty and filth and folly and madness among them, learned from that teaching and that school,” wrote the celebrated Jesuit scholar José de Acosta in 1590.\(^{361}\) This alter-knowledge needed to be rooted out. Prohibiting the native tongues would never be a successful measure, and therefore the more effective task was to govern and infiltrate them.

This became all the more important in the 17th century, by which time the fervor of the missionary endeavor was reduced to a depressed and diminished simmer. The dreams of heroically converting an entire continent to the Christian God had been

\(^{360}\) Both of these can be considered Renaissance projects, taking inspiration from the grammars of the great Salamanca humanist Antonio de Nebrija. Nebrija’s grammar of Castilian, the first modern grammar of a living language, was printed in 1492 and, so the story goes, he presented it to Queen Isabel the Catholic with the words, “Language was always the companion of empire... language and empire began, increased, and flourished together.” This grammar, and even more so Nebrija’s prior grammar of Latin, served as models for missionaries in their linguistic fieldwork. Joseph Errington, *Linguistics in a Colonial World: A Story of Language, Meaning, and Power* (John Wiley & Sons, 2010), 18.

\(^{361}\) Acosta, *Natural and Moral History of the Indies*, 251.
frustrated time and again as idols – long since thought to be smashed – seemed to yet survive in every grotto and at every crossroads.\textsuperscript{362} They had underestimated Satan’s grip, so it seemed.

He was a crafty devil. Hernándo Ruiz de Alarcón, a self-appointed and zealous extirpator in seventeenth-century Oaxaca, was not alone in concluding that the Indians’ minds were addled because the “Devil usually includes some truths” with his “thousand hoaxes.” In antidotes, healing rites, and fortunetelling, Lucifer shrewdly deployed these truths to string along those of weak faith.\textsuperscript{363} Fellow extirpator Jacinto de la Serna, using the example of “sorcerers” that call forth rain, explained that “these were true works, because it really did rain; but it was not a true sign, since it was not by God’s order (although with His permission); because only the Devil worked through natural science, which he has: applying \textit{activa passivis} [animating the inanimate] in those lands [the New World] is very easy for him.”\textsuperscript{364} If he spun only falsehood, Satan would have been easy

\textsuperscript{362} As but one example, Juan de Torquemada: “no quedó ciudad, villa, ni castillo, en todo el reino, en que ya públicamente no levantasen altares y construyesen templos en los callados y alturas de las sierras, para honrar y venerar en ellos al demonio, imitando las antiguas gentes idólatras.” Juan de Torquemada, \textit{Los veinte i un libros rituales i monarquia indiana: con el orígen y guerras de los indios occidentales, de sus poblaciones, descubrimiento, conquista, conversión, y otras cosas maravillosas de la misma tierra distribuidos en tres tomos}, vol. 3 (Madrid: N. Rodríguez Franco, 1615), 207. For more detail on the survival of pre-Hispanic rituals, see, David Tavárez, \textit{The Invisible War: Indigenous Devotions, Discipline, and Dissent in Colonial Mexico} (Palo Alto, CA: Stanford University Press, 2013), 26–123.

\textsuperscript{363} Ruiz de Alarcón, \textit{Treatise on the Heathen Superstitions That Today Live among the Indians Native to This New Spain, 1629}, 60.

\textsuperscript{364} “Verdaderas son, porque en realidad de verdad llovió; mas no fue verdadero signo, porque no fue con orden de Dios (aunque con permisión suya) porque sólo el Demonio obró con ciencia natural, que tiene; aplicando activa passivis y en aquellas tierras le es muy fácil” Jacinto De la Serna, \textit{Tratado de las Idolatrias} (Barcelona: Linkgua, 2006), 181..
to chase from the land; but his command and deployment of truth made him a much more formidable fiend.\textsuperscript{365}

Some colonial zealots focused in particular on what they saw as the natives’ credulous belief that words in and of themselves had powers in the world – powers of healing, prognostication, and election.\textsuperscript{366} Ruiz de Alarcón’s infamous treatise of 1629, for instance, was foremost a diatribe against the use of incantations in healing rites. Seeking to show the native specialists to be nothing but charlatans, Ruiz de Alarcón quoted at length their incantations to illustrate that “the false and superstitious doctors have introduced a deception with their excommunicated spells, attributing to words that which the act brings by itself.”\textsuperscript{367} He did not deny that patients felt relief, but insisted – to put his words in the terms of vulgar Marxism – that the cultural embellishments of the cure were but a superfluous superstructure. He sought to discredit the curandero’s powerful words and reveal the simple, reasonable truth of the underlying material cause.

So confusing was Lucifer’s deceptions that even the pious might mistakenly honor the prince of darkness. Jacinto de la Serna warned that Satan’s minions shrouded geomancy and necromancy with the clothes of the Saints, such that “even the Indians cannot tell.” An innocent believer may pray to an icon of Mary, but beneath the

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\textsuperscript{365} It requires mention that sorcery was another matter. Most agreed that at least some of the time black magic was powerful and efficacious. This, however, was understood as not due to any truth within the magic, but because of the Devil’s (or his demons’) direct and evil intervention.

\textsuperscript{366} In the context of medieval magic, election referred to answering specific questions about the near future, such as who shall I marry or will my child be a movie star, as opposed to more general prognostications that bad times are coming or the like.

\textsuperscript{367} \textit{Ruiz de Alarcón, Treatise on the Heathen Superstitions That Today Live among the Indians Native to This New Spain, 1629, 188.}
miniature vestments stood an idol of Huitzilopochtli. With appearance and truth so confused, even conscious free will – the epitome of faith – could not be entirely trusted. In the end, opinions ranged on the state and prospects for the Indians’ souls, but within shared parameters. There was near consensus that the Indians were of an inferior nature than Spaniards: they harbored an excess of “phlegm,” resulting in a sluggish character, frail bodies, diminished virility, and an incapacity for high intellectualism. Yet, most 16th and 17th century observers did not see this as an unsurmountable barrier against reform: with a proper upbringing, this phlegmatic complexion could be corrected as the soul was saved. The true root of the problem was the legacy of Satan’s long reign over the continent. Whether the immediate task was to root out sorcerers and shamans or a more general transformation of the Indians shared “moral history” (i.e. culture), the nature of the problem was confusion, deception, and hallucination. Satan and his first flank (sorcerers/shamans) twisted language, making meaning meaningless and therefore the missionary had to reconnect words to their true purpose.

Indians would never be able to discern truth from disorder without a more perfect language. As anthropologist Joseph Errington writes, Spaniards understood the project of applying European letters and grammar to the native tongues to be one of improving upon an imperfect language.\textsuperscript{368} Although a few writers indeed admired Nahua pictographic histories (and even more so Andean quipus),\textsuperscript{369} the absence of a recognizable written script was commonly cited as evidence of cultural and technical

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\textsuperscript{368} Linguistics in a Colonial World, 22–45.
\textsuperscript{369} Vetancurt, Teatro Mexicano, 4; Acosta, Natural and Moral History of the Indies, 343.
\end{flushright}
inferiority. Writing aside, even the languages themselves were understood to be insufficient for the needs of polite society (policía). The always lucid José de Acosta put it thus: “But because their figures and characters were not as adequate as those of our writing and letters, this meant that they could not make the words conform exactly but could only express the essential parts of ideas.” The colonial linguistic project, therefore, was to uplift native society by giving them the language that on their own they could never achieve.

This was about more than technology. Human nature, some wrote, included an innate compulsion towards God and belief, and this stood for the Indians as well. Agustín de Vetancurt, a seventeenth-century chronicler of the Franciscans in the New World, explained: “All of the nations of the world, however barbarous they may be, have by the nature of reason [at least] a confused knowledge of God’s existence, because reason dictates that there is some higher being that can mitigate the defects and fulfill the necessities of life.” However, because of their inadequate means of expression, the Indians misidentified and blurred this compulsion, which then fragmented into a pantheon and opened a thousand doors for Satan. With improved language, reason could be set back to its nature and dictates.

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371 Natural and Moral History of the Indies, 304. Or, Bartolome de las Casas: “[they] lack a literary language which corresponds to their maternal idiomatic language, as is Latin to us, and thus [they] do not know how to express what they think.” Cited in Anthony Pagden, The Fall of Natural Man: The American Indian and the Origins of Comparative Ethnology (Cambridge: Cambridge University Press, 1987), 130.

372 Teatro Mexicano, 69.
Such was the approach to language and linguistics for the majority of Spanish imperialism. Language was not only a technology of control, but moreover a battleground and essential tool for waging war on Satan. Spaniards, therefore, expended immense resources to harness language, to discipline it, train it, and otherwise direct and limit its use to ways that would inspire obedience to the Spanish monarch, focus free wills on the word of God, and uplift native lifeways to the paragon of Christian policía.

This, however, was becoming a dated approach by the mid-eighteenth century. When León y Gama was stirring the popular enthusiasm for medicinal lizards, he was participating in a reversal of the terms of imperial linguistics. Rather than a source of deficiency, language was newly interpreted as a sort of time capsule containing – beyond the corrupting influence of human consciousness – nuggets of Eden. At least in theory, the Creole intellectual class now sought to reverse the terms of standardization and acculturation and rescue true indigeneity from the grindstones of time and imperialism. Decades later, in the mid-nineteenth century, the much more famous and infamous French and British Orientalists articulated a complementary vision of linguistic recovery. The differences, however, reveal the uniqueness of the case in New Spain. According to Edward Said, the original orientalists (Silverstre de Sacy and Ernst Renan) secularized the methods of classical philology and aimed these towards redeeming the lost and corrupted, but formerly noble, cultures of the Near East. Theirs was a transformative project to “rescu[e] the Orient from the obscurity, alienation, and strangeness” that they themselves constructed. They collected language exemplars, classified these into genealogical models, and inductively arrived at theoretical ur-languages and true types. “The Orientalist,” wrote Said, “could celebrate his method, and his position, as that of a
secular creator, a man who made new worlds as God had once made the old.”

Whatever pride they might have felt about this mission, though, was tainted by the cynicism and weight of the white man’s burden.

The parallels between the Orientalists and New Spain’s intellectuals are clear enough: both sought to redeem the present by recovering the linguistic past. But the practice in New Spain was colored by much more sanguine optimism and religious intention. “Indians,” like “the Orient,” still needed to be reformed to civilization, the old colonial burden. But Spaniards in striving to redeem the ancient greatness of their colonial servants they also aspired to true knowledge of nature as God created it. In this way, universal knowledge could be perfected, objects and their signs could be reunited, and humankind could reach a more perfect state. It was a new millennium.

Redemption of the Indian, of the Kingdom, of Humankind

No small amount of secular redemption was at stake in this project to recover, reconstruct, and rescue from oblivion the Indian linguistic past. Creole intellectuals were at pains to emphasize time and again that “America is the purse of omnipotence, and the earthly Paradise that enriches Europe.”

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374 In a sense, this seems to be a patently anti-modern stance. Michel de Certeau, for instance, writes that fundamental to the development of the idea of “experience” and the “experiment” in early modern thought was precisely the divorce between words and their objects, such that the relation of a word to the world became uncertain and in need of a method, an epistemology. León y Gama’s commitment to the myth of Babel and the Adamic language thereby appears to be opposed to the main current of experimental science. The more apt conclusion, however, is the recognition of the plurality of Enlightenment and scientific practices that do not add up to a coherent “modernity” *The Mystic Fable, Volume One: The Sixteenth and Seventeenth Centuries* (Chicago: University of Chicago Press, 1995), 123.

375 Venegas, *Compendio de la medicina: o medicina practica*, frontmatter.
published in the *Gazeta de México*, clearly illustrated for the reading public the trade imbalance. But the Americas’ “omnipotence” could not be counted simply in silver and gold bullion, or timber or furs, and the error was not only one of imbalance and unrequited love. Rather, in the Creole mind Europe’s greed for the base wealth of the Americas suppressed the region’s real gifts to humankind – gifts not of wealth, but of health. “The advantage of this prodigious Medicine that Flores [brings to our attention] should be valued more than gold,” insisted León y Gama. 376 This was a noble type of wealth, the antidote to “the incurable disease of cancer” and, perhaps, “for others,” including “rabies, leprosy, Saint Anthony’s fire, Saratan [a type of cancer], bubas, Tesis [inflammation], lung infection, intestinal infections, uterine problems, all kinds of intermittent fevers, chills, tercianas [a type of fever], and hypochondria, gout ... in the end, all that exist within the viscous liquids of the human body.” 377 Like quinine before it, soon the world would celebrate and covet Spain’s contribution to human health.

Importantly, this sense of heightened agency, this capacity to rescue humanity from so universal an ill as cancer, was not only a heroic deed, but a self-consciously global and public one. Another New Spanish intellectual interested in indigenous medicine expressed that the objective of his generation was to prove this “a memorable and celebrated epoch, [that wins] the applause of the most advanced future generations (posteridad).” 378 José Ignacio Bartolache (1739-1790) was a celebrity physician and the sole author of *Mercurio volante*, an important but short-lived periodical that pedantically

376 García de la Vega, *Discurso critico que sobre el uso de las lagartijas*, prefatory comments.
377 García de la Vega, 3.
lected at “those we call vulgar, people who pass through the world in ignorance.”

His insistence that the future was a possibility to achieve was nothing new. Since the conquest, missionaries imagined their work as contributing to the spread of God’s word across the globe, a process that when complete would initiate the End Times. Legal thinkers also conceived of the Catholic empire as something in the process of becoming—an epoch-making, globe-spanning something. Nonetheless, by 18th century, the future’s torch was surely in the hands of England, France, and Holland and declension was a rote part of Hispanic discourse. In the new distinction between advanced and failed-to-advance societies, Spain was backsliding Bartolache and his peers sought to right that calendar. But more novel in their anxiety was a perception of the world stage and the risk of shame among nations.

Bartolache’s sense of globalization might fit well what we today call secularism. That is, he and his peers envisioned themselves as inhabiting a world where all men were measured by the same profane assay under the gaze of an abstracted “humanity.”

379 Bartolache, 12.


381 Bentancor, The Matter of Empire.

382 Cañizares-Esguerra, How to Write the History of the New World; Cañizares-Esguerra, Nature, Empire, and Nation.


384 Anthropologist Talal Asad writes that this notion of the secular (which is not a comprehensive definition) developed out of the age of exploration and the problems ethnology made for Christianity and the other Abrahamic faiths. In sum, he concludes that the theological problem of the 16th century—whether the Indians were guilty of forsaking God if they had never heard of Him—led ultimately to the conclusion that men may believe different things. And this conclusion created the imaginary space of the secular: a realm in which belief happens, one that transcends belief, or what now goes by the suspect name of “reality.” Talal Asad, Formations of the Secular: Christianity, Islam, Modernity (Stanford University Press, 2003), Chapter 1.
However, secularism was not part of their vocabulary (nor was it anywhere in the world at the time) and its close kin and most trusted partner, “science,” was still far from gaining the hegemonic weight it would accrue in Independent Latin America a century later. 385 This latter word, science, Bartolache and his peers used in ways both pushy and defensive, but always with a somewhat hollow meaning. Although they wrote about elevating realms of knowledge to a “true science,” there was little firmness to this concept. 386 They were certain that humankind could advance, indeed that it would and must and that the moral duty of the intellectual class was to effect this through science. However, this mechanism of progress remained ephemeral and wispy. The controversy of the lagartija, as well as the other efforts of the age to harness the ancient medicinal wisdom of New Spain, ultimately concerned how this mechanism could be defined, to what entity it applied, and who had the keys thereto.

There was considerable consensus on the second of these – the target of progressive intervention – even if this was only due to an abundance of ambiguity. These authors reminded their readers on nearly every page that they lived, thought, experimented, politicked, studied, and wrote all for the benefit of “society.” This society was, however, never defined, and one searches in vain for any explicit clarity. However,


386 Antonio de Alzate’s description of the progress of ideas, for instance, was a messy stew of unrelated ideas coalescing for the good of society: “Philosophy, earlier so spiny... is now reduced to its true end. Logic... to that with is useful. Physics... unveils nature by way of discoveries... Metaphysics is redeemed from its shackles and prisons... Medicine... has unearthed the Systems to the country of the imagination... Even mathematics... has usefully contributed to society... The reform even has extended to History, Theater, Poetry, and the education of Youth... “José Antonio de Alzate y Ramírez, ed., Asuntos varios sobre ciencias, y artes: obra periódica (Mexico: La imprenta de la Biblioteca Mexicana del Lic. D. Josef de Jauregui, 1772), unpaginated..
by reading into their words we see that the society they write about was always of a dual nature. On the one hand, it signified a microcosm, a specific population with which one is socially linked – an “imagined community,” as Benedict Anderson coined it.387 But society in their writing also always indicated a macrocosm consisting of all of humanity (or more precisely, that portion of humanity capable of attaining civilization). Thus society included all of humanity plus something extra – that portion to which one is actionably linked. Or, turned around, it consisted of the communities with which one is networked plus all of humanity. The word’s denotation was super-full and it was from this that its power derived.

Our understanding of what society meant for Spanish intellectual projects is aided by looking at the official 18th-century Castilian dictionary of the Real Academia. The original 1739 edition, which was printed before society gained the full meaning above, the term was defined thus:


Society (2). n. [feminine] Also refers to a committee or company of various subjects for the advancement of faculties and sciences. Lat. Societas.388

We see here that society meant, in the first, a passive object, a collectivity of humans; and in the second, it signified an agent, an active knowledge-subject. In this early 18th-century definition, we also witness an exact parallel to the macrosom-microcosm of later usage. What is different is the scale: rather than all of humanity, the macrocosm is only the collective of rational men; and rather than the local communities, the microcosm is

387 Imagined Communities.

388 Real Academia Española, Diccionario de la lengua castellana, 6:133.
only the community of scholars. Through the Enlightenment, both of these bloom to incorporate more and more people in a globalized world.

What was most important in New Spain was that this idea of society now included *Indios*. They too were part of both the macrocosm and the microcosm. As part of *all of humanity*, *Indios* were the needy and deserving recipients on whose behalf the intellectual hero endeavored. And indeed Enlightenment age New Spain witnessed renewed efforts at public health and technocratic social reform. But Indians were also part of the hypothetical local community to which the author (i.e. Bartolache, León y Gama, etc.) also belonged. As part of this networked community, they were part of the extended knowledge-subject. Like the intellectual class, *Indios* too had a mission and duty to the world.

Not everyone bore this cross equally, though. In theory, the Spanish intellectual carried the weighty top end of the cross and the Indians, fitting their capacity, merely supported the base. Urging his peers to bring forth to the public sphere any empirical medicines they know of, the polemicist, publisher, and jack-of-all-disciplines Antonio de Alzate y Ramírez explained the learned man’s duty: “I do not believe that the Charity of able Subjects (and of whom humanity requests aid, according to the contract they affirm when they declare themselves doctors) would refuse to fulfill such a religious virtue.” Such sentiment was not mere professional self-importance, but rather was a critical factor by which one lives, fights, and dies within the arena of the public sphere. When, for instance, two fellow scientists and experimenters expressed doubt about the safety of

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389 Few, *For All of Humanity*; Howard, *The Royal Indian Hospital of Mexico City*.
390 Alzate y Ramírez, *Asuntos varios sobre ciencias, y artes*, 82.
eating “volatile” lizards, León y Gama blasted them for betrayal: “to wish to confound and suffocate such a simple remedy, as experimented on by learned doctors, [is] counter to the love of society... And for what other motive could this be but to exonerate oneself from the duty pressed by the Royal Tribunal of the Protomedicato, in being named one of the explorers of this very remedy?” (italics original). All of this was printed for the public to see, and thus the accused, Manuel Antonio Moreno and Alejo Ramón Sánchez, found themselves “placed in the situation of having to vindicate [their] credit” and prove that they also deserved the mantle of guardians of society.

Again, what is important and unique in the context is that Indios too had a role in this special purpose, even if it was still hypothetical. As was expressed time and again, the “abundant treasures of Our America” could for the most part only be unlocked through some kind of native participation:

What utilities, what benefits would humanity receive if we could discover the medical methods that they use to reestablish their health from these individuals that are reputed to be so stupid by those who are ignorant of their praxis? If we cease to disdain learning from these simple people, and succeed at treating them intimately, we will discover Simples more important than [those of] the most eloquent Dissertations and the most curious discoveries of anatomy.

The intellectual’s duty to society was to transcend prejudice and the glitz of “theoretical study,” and accept innovations from unlikely sources. And, on the other side, the

391 León y Gama, *Instruccion sobre el remedio de las lagartijas*, 25.
392 Moreno and Sánchez, *Carta apologética de las reflexiones sobre el uso de las lagartijas*, prefatory comments.
393 José Antontio Alzate y Ramirez, *Observaciones sobre la física, historia natural y artes útiles* (México: José Francisco Rangel, 1787), 69.
394 Flores, “Específico nuevamente descubierto en el Reyno de Goatemala,” 2.
Indian’s duty was to divulge, to open, to no longer resist or cower but to connect and network, to join in globalization. Consider how the physician Manuel Venegas put it in his extremely popular medical manual: “Providence, always intent on sustaining and conserving Humanity, has invested abundant treasures in our America, offering us copious accessories within the three Kingdoms of vegetable, animal, and mineral, such to remEDIATE nature’s afflictions, although with such discretion that many of these are reserved to the Savages of the Mountains, who through withdrawal and indigence are incapable of taking advantage of civilized methods, or those used by cultivated People of delicate taste.”

Opening oneself to others, therefore, was a moral obligation to humanity, but it was also salvation for the Indians by integrating their locked knowledge into the sophisticated methods of the civilized doctor. Indians, especially the bárbaros on the frontier, were still considered uncivilized and uncultured, but they were at the same time charged with selfishness in their desire to remain isolated and separate.

Creole professionals, in sum, were applying their professional ethic to Indios and the population at large. These were obliged not to see the light of God or honor their king (although this was yet current), but to contribute to human improvement by connecting with the networks of globalizing knowledge. Granted, Indians had a far more passive role within society’s special purpose, but nonetheless the they were part of the imagined agentive collectivity that produces redemptive knowledge. Indians were not just imagined as a resource, but rather as a secret potential. They were a secret potential that would blow wind into some kind of collective agency – no ordinary agency, but a

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395 Venegas, *Compendio de la medicina: o medicina practica*, prefatory comments.
heightened special purpose. In the hyperbolic style so characteristic of New Spanish print culture, Joseph Giral Matienzo, whom we met earlier, described how this agency may be unleashed:

[I]t is certain that [the lagartijas] are effective, for they can even make those born mute talk — an old epithet it is in medicine, that of being mute, one that applies so well to the American, because although we have had distinguished doctors in this Realm, too often, due the impediments to printing in this country, they have been kept mute, and have not been able to communicate to posterity the observations of their practice. [This is] a disgrace that today we find these Lagartijas rectifying. These, although mute themselves, have broken the silence of the Young American, raising his voice, to the awe of Nations.\textsuperscript{396}

Here, in the 1780s, we have an early articulation of the sort of speaking for the nation on a world stage that would become so pat and common among national elites in the 19th century. What the episode of the lagartijas helps us see is just how the Creoles started to see themselves in that role and to imagine the collective that is speaking.

From this angle, the angle of imagined agency, the real tragedy of the decrepit Spanish empire was that in its neglect and overreach the true potential of the Americas remained unrealized. Antonio de Alzate described this – again melodramatically – in his “Funeral Elegy for Reason,” written after Charles IV rolled back the investments of his predecessor in the advancement of science. Alzate mourned and pronounced “the funereal honors due to the pious memory of that invisible Being, reason: always august, always memorable, and most exquisite.” Reason is dead, he wrote: “Woe to this disastrous age! This century of sadness and bitterness!” Like those left behind after any cataclysm (be it the rapture, capitalism, atomic warfare, or catastrophic climate change), the current generation can but accommodate to loss and invest their desperate hope in

\textsuperscript{396} García de la Vega, \textit{Discurso crítico que sobre el uso de las lagartijas}, prefatory comments.
their progeny. Through the innate empiricism of mankind, opined Alzate, one day, perhaps long to come, reason will be “reborn like a Phoenix.”

**Imperialist Nostalgia and Controlled Syncretism**

New Spain’s cultural class hoped that by recovering the ancient knowledge of the Aztec (and the remnants of this knowledge among the “untamed Indians”) they could prove their service to humanity and raise their own profile on the world stage. But they also sought to redeem the Indians around them: in their eyes, the acculturated, debased Indians who lost the strong and ancient ways. The anthropologist Renaldo Rosato defines such a sentiment of historical loss and redemption “imperialist nostalgia”.

Within the colonial imagination, locating the true Indian beyond the frontiers of space and time erases and delegitimizes the colonial subjects who mine the ore, cook the *merienda*, and wrangle the cattle. All of these are, in comparison with their ancestors, degenerate and hopeless types and their continued exploitation is merely unnoteworthy. Nevertheless, as is evident in the paragraphs above, in New Spain this nostalgia was also aspirational and utopian. The heroes of Mexican nationalism did not merely lament the loss of the true Aztec, but also sought to actively mine the past for useful and lucrative resources.

The imperialist nostalgia of Spaniards and Creoles took on a particularly modern gloss in how they defined the Indians’ cultural demise. Most admitted some of the ill

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397 *Observaciones sobre la física, historia natural y artes útiles*, 111–12, 119.

consequences of the horrors of the decimating wars of conquest, but these, too, proudly evidenced Spanish virility and bellicose greatness, which even the most ardent proto-nationalists were eager to defend against the scorn of the modern French, Dutch, and English polemicists. Rather than lamenting the particular violence of Spanish imperialism, Creoles decried European imperialism in general – not at all on the grounds of the rights of the vanquished, but out of a critique of globalization. For example, Antonio de Alzate, in arguing why the Aztec should be shelved beside the Greeks as part of antiquity, explained it this way: “The Mexican Nation in its day (not including its contemporary presence) should be considered [part of] antiquity, because once annexed by the Spanish Nation, from which it adopted its laws, its customs, and the true Religion, [the Mexican Nation] lost its own characteristics that distinguished it from other Nations, and in this regard Mexican Indians today are, in relation to those before the conquest, the same as the modern inhabitants of Polynesia or Morea in relation to the Greeks of antiquity.”

399 The problem with modernity – if they could have put it just like that – was the homogenization of the world which accelerated with the unification of the hemispheres and which led to cultural loss, particularly the loss of viable and useful forms of expertise descendent of the Adamic language.

This mix of anti-global particularism and imperial nostalgia was, it appears, solely a Creole obsession. This became most evident with the arrival of the Royal Botanical Expedition to New Spain in 1787.400 The expedition’s mandate was to assemble for

399 José Antonio de Alzate y Ramírez and Nicolás León, Descripción de Las Antiguedades de Xochicalco (En Mexico: Por don Felipe de Zuñiga y Ontiveros, 1791), frontmatter.

Spain *useful* information regarding the potentially lucrative natural resources of the Spanish Americas. Methodologically, as Daniela Bleichmar explains, the expeditioners aimed to convert first-hand experience with plants into transportable mediums (particularly paintings) that would allow these experiences to be accumulated and organized at the imperial center, the Royal Botanical Garden in Madrid. The Linnaean system of binomial classification could then serve to organize this knowledge into a vast catalog comprehensively informing colonial rulers of potentials for control and economy.\(^{401}\) Creole intellectuals, Alzate in particular, argued vociferously against the Linnaean method and defended local, vernacular taxonomies as most accurate and apposite to Mesoamerican nature.\(^{402}\) Scientists from Spain explicitly worked towards a program of globalizing and universalizing knowledge; American-born Creoles, imagined a world of specially endowed nations.

Of course, this opinion complemented well the opportunities and ethical obligations of the colonial professional class. Seeking to legitimize their role in society, these self-styled intellectual heroes explained themselves as uniquely capable of bringing Indian wisdom to the public. This was part of a triangulation of audiences and knowledges: they positioned themselves as the sole middlemen 1) between modern European science and the public of the colony; 2) between Indian wisdom and the public of the colony; and 3) between this Indian wisdom and men of science of Europe. They


advanced themselves as the indispensable intermediaries between society, science, Indians, and nature, and therefore, as the most fit to direct social reforms.

It must be noted that this self-importance was also a reaction to popular pressure from within the colony. Eighteenth-century New Spain saw an incredible proliferation of broadsides and manuscript and print handbills extolling the “marvelous virtues” of seeds, beans, leaves, roots, animal parts, waters, minerals, and much more.⁴⁰³ Many of these cited sources of native knowledge as their validation and all of them challenged the hegemony of canonical European medicine. Even the chief medical officer of the colony, protomédico Manuel Venegas, fretted that while physicians fussed with their exquisite theories, “an old woman, a poor peasant, or a stupid Indian mock him with the use of their simple, unappreciated drug.”⁴⁰⁴ Earlier in the century, professionally trained specialists officially decried such recipes and medical syncretism (although in practice was of course another matter). But, by the 1780s, while the Bourbon Reforms of the empire were systematically favoring peninsulares in important matters of state and public health, Creoles saw an opportunity in their relative proximity to popular medicine.⁴⁰⁵ They positioned themselves as uniquely capable of revealing the true and ancient wisdom of this American patria and bringing order to the processes of exchange and mixture.

Yet while claiming the torch of medical syncretism, these Creoles simultaneously denied its true extent. As Gonzalo Aguirre Beltrán first observed and many scholars have since confirmed, New Spain experienced an uneven, bumpy, shifting yet inexorable trend

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⁴⁰³ See chapter 3.
⁴⁰⁴ Venegas, Compendio de la medicina: o medicina practica.
towards “medical mestizaje” over the colonial period. Laura Lewis explains how the murkiness of this site of exchange – of prohibition and permission; of exception and Satan; of miracle, myth, and magic; of borrowings, re-borrowings, and re-re-borrowings – compounded into a terrifying situation of uncertainty and peril for the ruling caste that can best be described as “a hall of mirrors.” León y Gama, Alzate, Bartolache, and their peers denied the presence of such madness, and instead described the colony as if the ideal social stratification of the caste system (español, indio, negro) was a reality. They tried to understand New Spain as a society of alienated parts. And they promised to unite the parts, and to do so with measure and control.

* * *

Conclusion

Don de Luna’s cat may have saved its master’s life, but ultimately the miracle drug lizard did not conquer the world scene. Traces of early 19th century recipe books show that lizards of various types remained part of the popular pharmacopeia, as they had been for centuries, and even the specific uses championed by León y Gama, Flores, García de la Vega, and Matienzo gained occasional mention. However, the brightest lights of the colony failed to convince their imagined European readers to toss down a

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406 Aguirre Beltrán, Medicina y magia; Quezada, Enfermedad y maleficio: el curandero en el México colonial.

407 Hall of Mirrors: Power, Witchcraft and Caste in Colonial Mexico.

408 In this regard, their position reflected the political trends of the colony. In the 18th century, the racialized caste system was becoming more rigid, and colonial officials were placing renewed emphasis on clarifying the bounds between social groups. The effectiveness of these intentions and policies to restrict miscegenation was, however, minimal Cope, The Limits of Racial Domination.
bloody Mexican reptile. The lagartija affair, however, was simply the most pronounced of many efforts of the age to convert what intellectuals believed to be the Indian’s privileged knowledge of nature to a life-saving commodity. Agave, steam baths, medicinal springs, begonias, and numerous other plants and creatures (including marijuana) were considered, tested, assessed for their mobilization in a new age of globalization. Many of these came to have much more enduring legacies in independent Mexico.

The significance of the moment, however, lain not with medicine but contemporary notions of race and indigeneity. The prior 250 years of Spanish colonialism evinced many overlapping discourses on meanings of indigeneity. The Indian represented Aristotle’s natural slave as well as the noble savage; Indians were derided as the sons and daughters of Ham, and thought to be degenerate Egyptians, former Atlantisians, or even descendants of a long lost Spaniard from around the age of Noah. Indians were the dangerous special minions of Lucifer or a weak, phlegmatic people destined to extinction. They were potentially giants and border-line humans. They were sorcerers and idolaters and they were children and they were at times even an honorable lineage. Mostly, though, the Indians were understood to be God’s charge to

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409 Achim, Lagartijas medicinales: Remedios americanos y debates científicos en la Ilustración.
411 Carlos de Siguenza y Gongora, Obras y Biografía (Mexico: Sociedad de bibliofilos mexicanos, 1928), 181–82.
the Spaniards, whose more-or-less forced labor was justly exchanged for their otherworldly salvation.

The novel valuation of “Indian medicine” reflected a new vision of the Indian’s imagined place within the modernizing colony. It was ideological far more than real, however this was an important change for the dawning idea of Mexico as a nation. As members of society contributing to a shared special purpose mobilizing the resources of a population, Indians became for the first time enveloped within a social collectivity that also included the high-caste Creoles.

Twentieth-century intellectual concerns led historians to search for the origins of national identity to explain the advent of independent nationhood in the 19th century Latin America. Benedict Anderson, in his field-defining work of 1983, explained the object of study was a sense of “horizontal kinship” that united all members of a discrete territory into a shared sense of belonging. Since, historians have sought to trace the development of “Creole patriotism,” that is, the transfer of primary identification from Old Spain to New World colonies. The weight of current scholarship, however, shows this objective to be ill-fitting to the cultural and social realities of Latin American viceroyalties in the century before the wars of independence. In sum, this is for two reasons: first, colonists seldom privileged New Spanish, Peruvian, or New Granadan identity over the other affiliations they used to valorize their lives; and second, colonists who could claim Spanish “blood purity” had few incentives to identify any more closely with their low-caste brethren and had plenty of reasons to hold these at the greatest distance possible. It is perhaps time we leave identity behind as our primary tool of historical interpretation.
In this chapter, I have tried to highlight a different angle on the origin of the idea of Mexico. Creole intellectuals were in no ways eager to regard or be regarded as equal to Mesoamerica’s native inhabitants. They were quite explicitly much more attuned to furthering their reputations with the learned centers of Europe. In a dual sense, however, they did newly imagine themselves to be members of the same society as Indians. First, as they adopted increasingly technocratic professional identities, they took upon themselves the responsibilities for social reform previously belonging to the church and crown. Indians, in this sense, were becoming their charge, along with the rest of the plebian population. Second and more novel, Indians were the secret potential of the collective agency of the intellectuals’ society. This had utopian undertones, as is evident in the pages above. However, the ambition grew quite reasonably out of the currents of the Enlightenment in New Spain. European-wide attention to optimizing the productive powers of a population – a cornerstone of liberal political economy – inspired Creoles to re-assess the social assets surrounding them. Creoles were deft observers of Spanish and European affairs, and imperial reform towards comercio libre raised anticipation and questions for how New Spain would be reintegrated into a world of global mercantilism. Native medical knowledge was a small part of this world that they could corner – or so they hoped – for both local profits and global standing. They didn’t have to like each other, but together there was so much society could do.

413 Patricia Aceves Pastrana, Química, botánica y farmacia en la Nueva España a finales del siglo XVIII (México: UNAM Xochimilco, 1993); Arron, Containing the Poor; Few, For All of Humanity; Howard, The Royal Indian Hospital of Mexico City; Lanning, The Royal Protomedicato; Morales Cosme, El Hospital General de San Andrés: la modernización de la medicina Novohispana 1770-1833.
These armchair bioprospectors were soon joined by others less attached to the comforts of Mexico City. In the last decade of the century, with the arrival of the Royal Botanical Expedition to New Spain, Indian medicine was increasingly sought afield in provincial villages, frontier outposts, and beyond. Naturalists and doctors hoped that the “savages of the mountains” had maintained the ancient practices, unsullied by modern sins. A purer wisdom might still be out there. In chapter 5 we will examine a few of these efforts. These were in two senses the culmination of the imperial fetish for Indian medicine. Firstly, they represented the further extension of the mobilized unit of persons – that is, society in the agentive sense – to span most of the territory and population of New Spain. Spanish elites were, for the first time, imaging a type of secular agency in the world that networked them with the most distant Amerindians of the frontier. Secondly, it is through this project that will soon emerge the idea of a *materia medica mexicana*. 
Chapter 5: In Search of the Materia Medica Mexicana

Among the diverse ends to which our Sovereign has directed the costly scientific expeditions that by his Royal order have been implemented in this America, the first and most important is to make known to his faithful vassals the great treasure of vegetables though which nature distinguishes this soil, and proportioning [to his vassals] in this way quick, easy, cheap, and secure remedies for all their ailments.

Martín de Sessé, Director of the Royal Botanical Expedition, circa 1800414

[The] surgeon and I have had to tolerate much derision, scorn, and infamy from the pueblo because of the efforts of one insolent and cocky curandero to persuade [the people] of our total lack of expertise.

Ignacio León y Pérez, Botanist, to Martín Sessé, 1793415

In 1832, the Academia Médico-Quirúrgica of Puebla published the first and foremost treatise on the new nation’s medicine. The aim of the *Ensayo para la materia medica mexicana* was to prove that independent Mexico no longer needed to be dependent on Europe and its “foreign” medicines and that “Mexico can vaunt having its

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414 “ Expediente sobre los efectos de plantas medicinales en los enfermos del Hospital de San Andrés” (1800), 1r, WMS/Amer.44, Wellcome.

415 “Carta de Ignacio de León a Martín Sessé comunicando su intencion de solicitar el traslado del Valle de Santa Rosa a la Villa de la Mondova y al la del Saltillo, por razones de salud y seguridad al no pisoner de escolta para sus salidas al campo” (February 3, 1793), V, Box 1, Folder 4, Doc. 2, Real Jardín Botánico.
own materia medica, composed solely of medicines of indisputable virtue.” What other
nation could boast a national, autochthonous pharmacopoeia? For the urban elite,
patriarchs now of a nation, it was a corporeal form of self-realization, one that cemented
the bond between the body of the citizen and the imagined territory of the nation. With
the empire went imperial medicine, the thinking went. The collapse of the Royal
Protomedicato, the crown’s medical oversight board, during the twilight of the empire
brought an end to medical colonialism.416 Now a free citizenry could take its own charge
of God’s endowment. Moreover, the notion that “there is no medicinal drug, excepting
three or four, of which we are not abundantly supplied by our own soil” underscored the
natural boundedness of the country and its almost preternatural match to the needs and
desires of the human body.417 The 135 simples described in the Ensayo comprised a
milestone in the new nation’s history of medical mestizaje, which in the 20th century
would continue to underscore Mexico’s claim to a unique national culture.418

The Ensayo para la materia medica mexicana of 1832 reflected more than fifty
years of organized research into New Spain’s materia medica. As we have seen in the
prior two chapters, the medical profession in Mexico began in the middle of the 18th
century to toy and experiment with the endogenous and novel medical ingredients that
were circulating in the capital city. This alternative medical economy had been present
since the earliest days of the empire, but recently it had developed into a visible venture

416 See Lanning, The Royal Protomedicato, chapters 14 and 15.
417 Academia Medico-quirurgica de la Puebla de los Angeles, Ensayo para la materia medica Mexicana,
arreglado por una comision nombrada por la Academia Medico-Quirurgica de esta capital, quien ha
dispuesto se imprima por considerarlo util, iii–vii.
418 Aguirre Beltrán, Medicina y magia.
and the Creole intellectual elite saw an opportunity to position themselves as originators of new scientific knowledge. The first intensive attempt to harness this steed was the affair of the lagartijas in 1782 (chapter 4), but it wasn’t until the last decade of the century that the endeavor got underway in earnest. The impetus was the arrival in New Spain of the Royal Botanical Expedition in 1787.\footnote{For overviews, see Xavier Lozoya, \textit{Plantas y luces en México: la Real Expedición Científica a Nueva España 1787-1803} (Barcelona: Serbal, 1984); Engstrand, \textit{Spanish Scientists in the New World}.} After founding a headquarters and teaching institute in the capital, the expedition, led by Martín de Sessé,\footnote{Martín de Sessé y Lacasta was born in Baraguás, Spain in 1751 and was educated in medicine in Zaragoza. According to Iris Wilson Engstrand, while serving as a military physician in Havana he devised a plan for a botanical mission to New Spain modeled on that of Hipólito Ruiz in Perú. He petitioned and won royal approval, and spent 16 years in New Spain until king Charles IV demanded his return. Political turmoil in Spain prevented him from ever bringing his botanical project to fruition. He died in 1808 in Madrid.} ventured out in search of the colony’s natural bounty. The following sixteen years were a period of fervent investigation – by foreign expedition members as well as Creoles – into the plants, minerals, animal parts, and waters of the realm and the ancient and contemporary knowledge of how to use them on the body. The national pharmacopeia was the product of imperial science.

This chapter examines how the Royal Expedition in particular, and Spanish imperial scientists in general, attempted to wrest knowledge from their non-Spanish vassals. Colonial naturalists sought to effect in New Spain a controlled process of medical syncretism, bringing “Indian” and “Aztec” medical knowledge within the European pharmacopeia under their exacting oversight. To do so, they aimed to obviate the syncretisms and mongrel (in their opinion) medical cultures of urban markets and instead go straight to the source – ideally unacculturated, true “Indians.” They were
border-crossers. Or at least the aspired to be border-crossers with the acuity and reason to safely integrate across boundaries of mind and land and enrich (but not transform) European medicine. Nevertheless, in this chapter I show that in truth most lacked either the gall or the mobility to escape the circuits of Spanish society. For nearly three hundred years elite Spaniards set themselves as a caste – even a republica – apart, with urbane tastes and refined manners. When their enlightenment preferences now called for measured transgression, they simply lacked the ability to effectively move (literally and metaphorically) in the colony.

Through three cases, from Toluca, Patzcuaro, and the Sonoran frontier, I demonstrate that Spaniards’ immobility placed much of the control (and profits) of this venture in subaltern hands, at least those sufficiently positioned to take advantage of the situation. The explicitly systematic, scientific effort to appropriate native knowledge was not simply a matter of exploitation. Rather, botanical expeditioning for materia medica was almost always dependent on healers, communities, suppliers, intermediaries, and guides who could identify, obtain, and explain the land’s resources. This gave them considerable, if local and situational, power to demand recompense or to choose obstinacy to protect their economies and communities. At times, Sessé and his team could muster the resources to buy or coerce cooperation; but at least as often, subaltern demands foiled royal and scientific prerogative, leaving the expedition empty handed and as ignorant of local materia medica as they were when they began.

The advent of the Royal Botanical Expedition was part of the wider ambitions of King Charles III (1716-1788; in power 1759-1788) to rebuild the Spanish empire on a foundation of science. Science was a new fetish that erupted onto the scene of global
affairs alongside of the building of the British empire and turn in globalization towards free trade. It would still be a few decades before that creature of the 19th century, the scientist, would garner his own neologism, but already in the late 18th century, European thought was dividing the world between those with and those without “science.” Soon, in the age of independence, every new Latin American national elite was keen to prove that their nations were among the former. In the 18th century, Charles III was eager to prove the Spanish were a scientific empire. He was a true believer, and was confident that the application of rational management and true knowledge would rescue Spain from nearly two centuries of imperial decline. But science – both in courtly culture and on the ground and in the colony – was as much an identity as a praxis.

The orders of the Royal Botanical Expedition were, thus, foremost to prove Spain’s was a scientific empire. Not that doing science did not count: the team of naturalists was charged to create a comprehensive catalog of the viceroyalty. But the royal order specifically mandated that Martín de Sessé and his company of naturalists were to redeem the legacy of Francisco Hernández and prove him to be among the greatest forefathers of modern medicine and natural history. Sessé explained his orders to the viceroy, Juan Vicente de Güemes, Count of Revilla Gigedo, thusly: “The first object which the Sovereign proposed in the project of this extensive journey was that of clarifying and perfecting the work of the celebrated Dr. Hernandez, which is being

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421 On the association of science with the West in this period, see: Elshakry, “When Science Became Western.”

422 This remains perhaps the central prerogative of Mexican historians of medicine to the present day.
imprinted by the Royal Account and Order.”

Aiding the mission, Charles III’s chief botanist Casimiro Gómez Ortega published a new edition of Hernández’s botanical findings to correct earlier publishing errors and to promote his legacy within the republic of letters. Science-ifying Hernández’s magnum opus was principally an effort at naming, or, renaming. This required retracing Hernández’s footsteps – which the expedition meticulously undertook – around the capital and south in the current states of Oaxaca, Morelos, Puebla, and Veracruz to track down again the medical simples of the now mystical Aztec. Then, after a probing examination of what in humans were called “shameful parts,” each plant and animal was rechristened with its “general and specific name” in the Linnaean system.

In this way, Hernández’s great work could be integrated into the catalogues of nature in Paris, London, and Amsterdam and bring honor to the memory of Spanish imperialism.

The Royal Botanical Expedition did not stand alone; rather, it dovetailed neatly (yet not without conflicts) with the ambitions of Creole and peninsular physicians, naturalists, intellectuals, and physicists who similarly hoped to bring the colony and its people under science’s umbrella. Together these sought, as Daniela Bleichmar puts it, to

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423 Quoted in Iris Higbie Wilson, “Scientific Aspects of Spanish Exploration in New Spain During the Late Eighteenth Century” (PhD Dissertation, University of Southern California, 1962), 79. In the King’s words: “for the special purpose of perfecting, in the light of the present state of the Natural Sciences, the original writings left by Dr. Francisco Hernández, Protomédico of Philip II... I have ordered to New Spain two Botanists and a Naturalist, all Spaniards, who will join Dr. Martin Sessé, whom I am naming today Director of the Expedition.” Quoted in José Longinos Martínez, Journal: Notes and Observations of the Naturalist of the Botanical Expedition in Old and New California and the South Coast, 1791-1792, trans. Leslie Byrd Simpson (J. Howell, 1961), viii.

424 Francisco Hernández, Opera, cum edita, tum inedita, ad autographi fidem et integritatem express, ed. Casimiro Gómez Ortega (Madrid: Ibarrae heredum, 1790), Opera.

425 This sparked some controversy with naturalists in the colony, who saw the Linnaean system as a foreign imposition. See: Lafuente and Valverde, “Linnaean Botany and Spanish Imperial Biopolitics.”
render the viceroyalty “visible and useful” by documenting, cataloguing, naming, drawing and painting, and collecting the flora and fauna of the realm. But they also pursued an evangelical mission to bring the good news of science to New Spain and to use this to uplift the empire, enlighten minds, and further science’s global destiny.

Figure 12: Árbol de manitas from Hernández’s 1651 Rome edition.

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426 Bleichmar, Visible Empire.

Intransigence

Much of the effort of redeeming Hernández’s name could be undertaken by visiting the herb sellers around Mexico City. Despite the authority of the Protomedicato to regulate the drug trade, herb sellers and curanderos/as were a common presence in the city where they mostly operated freely and openly. Scholars have given idolatry trials against curanderos much – and indeed perhaps too much – attention. These have proven to be very rich sources, however, the first conclusion from looking at them ought to be their scarcity. Because the categories of “curse,” “witchcraft,” “prognostication,” and “superstitious healing” overlap in inquisitorial documents and colonial discourse, it is difficult to come to precise numbers of trials against curanderos. However, the indices of the Archivo General de la Nación, which holds almost all New Spanish Inquisition cases, record the existence of 135 cases and accusations against curanderos and curanderas.\footnote{428} This averages to a little less than one case per two years. Many of these are for “witchcraft” having to do with activities unrelated to healing (such as luring a lover or divining the location lost property) and most of them are accusations that were not pursued by the holy tribunal. The tempo of these cases waxed and waned depending on the composition of the Holy Office, and therefore periods of five or even ten years without a single case are not uncommon. In sum, even if we assume the worst – that many cases that do not mention curanderos were still against healers, and that the small number of cases scattered in other archives contain a disproportionate number of trials

\footnote{428}{I thank Professor Linda Arnold for providing me with the PDF versions of the AGN catalog, which enabled this investigation.

Noemí Quezada similarly found 81 Inquisition cases in New Spain against curanderos/as between 1613 and 1806. Quezada, \textit{Enfermedad y maleficio: el curandero en el México colonial}, appendix.}
against healers – even then, we must conclude that coming to the attention of the authorities was a rarity, even an aberration, for informal healers. As in many realms of colonial life, the Spanish imperial policy towards medicine was intolerant and orthodox only occasionally and usually in theory only.

Thus the urban market was a fecund site for research. It was an open secret that herb collectors from around the city and beyond supplied the official, state-sanctioned pharmacies with local substitutions for expensive imports and household medicines.\textsuperscript{429} By the time that Sessé’s troupe arrived, this was a well-established economy, and, frankly, none of the actors of these networks appreciated the incursion.

Take, for instance, the \textit{árbol de manitas}. This Sessé doggedly tried acquire because its flower was deemed a powerful topical medicine. Hernández’s sixteenth-century description, however, was of little aid and he had failed to define the plant’s range or where he had found it. Even his illustration was wanting (fig. 2), lacking details that would enable an accurate identification. By inquiring at the city’s markets where he acquired a few specimens, Sessé “got notice” that there was only one árbol de manitas “in the whole world,” and this was in the town of Toluca. To Sessé’s disgust, Toluca had in prior decades developed a monopoly over the precious flower. So cornered did they have the market that the cost of a single flower could rise to one Real. Although the plant’s native range, as documented today, covers most of central Mexico and as far south as

\textsuperscript{429} Vicente Cervantes, “De la Violeta estrellada y de sus virtudes,” \textit{Anales de Ciencias Naturales} 6, no. 17 (June 1803): 193; Joaquín Velázquez de León, “Continuación, de los conocimientos interesantes sobre la Historia natural de las cercanías de la Ciudad de Mexyc. Año de 1790” (1790), 9r, WMS/Amer.114, Wellcome.
Honduras,\footnote{“Chiranthodendron pentadactylon Larreat.,” Tropicos.org. Missouri Botanical Garden. 10 Apr 2018. http://www.tropicos.org/Name/3900594.} in colonial Mexico City the only source was purportedly through the suppliers at Toluca. So to Toluca Sessé went “with the only intention being to observe, draw, and describe” the árbol de manitas.\footnote{Vicente Cervantes, “Del genero Chirostemon,” \textit{Anales de Ciencias Naturales} 6, no. 18 (October 1803): 303–14.}

Upon arrival Sessé found a magnificent tree standing in the central square (where it still stands today). The trip, however, was badly planned. The conventions of botanical description and illustration required the men to observe the plant in all of its stages, but principally while in flower and in seed so as to record its reproduction cycle, the key to the Linnaean system. But when the botanist arrived in Toluca in December of 1787, Sessé was disappointed to find the tree well passed its month of fruition. And so, as in so many instances in their travels, the Spaniards turned to the local Amerindians for an explanation of the plant’s life cycle, its behavior in the seasons, its patterns of growth – indeed everything that could not be ascertained from eyeing the tree for an afternoon.\footnote{This was a frequent lament heard from the expedition as it toured the countryside and was forced more often than desired to ask the locals for the details they had hoped to witness with own more trusted eyes.}

Standing there, Sessé later explained, he and his illustrator “asked the Indians if that vegetable propagated by seed or by shoots, and they responded superstitiously that God wants there to be no more than one árbol de manitas.” The tree fell under the authority of the justicia or deputy “of those Naturals” who showed little interest in cooperating.\footnote{Martín Sessé y Lacasta, “Duplicado de casta de Martín Sessé a Casimiro Gómez Ortega en la que relata las dificultades y obstáculos salvados para llevar a buen fin el proyecto del Jardín Botánico de México” (January 5, 1788), Box 1, folder 1, doc. 15, Real Jardín Botánico.}

Therefore Sessé summoned this man’s superiors, the corregidor and the gobernador de
los Indios, and tried to salvage the trip as best he could by having these order their underlings to chop off some shoots and arrange them in a planter. He then “gave a hefty prize to the Indian who lived closest to the tree” to care for these shoots and, when the time came, save the flowers for the expedition members. This well-rewarded Indian, however, “abandoned the box... [and then] cut the flowers, greatly frustrating the desires of our Botanists.”

Thwarted, Sessé returned to Mexico City with his shoots, two dozen of them. Within a few months, twenty-one had died, and then went two more. Eight years later the remaining one would finally give flower, but that was too slow. Despite snickers about Indian superstition, Sessé’s team of botanists appear to have bought the story of the toluqueños. For all of these eight years (and perhaps longer) they remained convinced that the tree standing in the center of Toluca was one-of-a-kind and therefore they again and again attempted to clone it. And even once the greater range of the plant was determined, the people of Toluca still provided the only available supply chain. Therefore, the director of the Jardín Botánico, Vicente Cervantes, who came with Sessé from Spain, ordered more trips to the town, all of which still failed to procure flowers or seeds from the locals. But they did eventually collected 136 shoots to propagate in controlled conditions. These too were unfruitful. Again and again Cervantes stripped

\[434\] Cervantes, “Del genero Chirostemon.”
\[425\] Even in 1803 this appears to be the case.
\[436\] Vicente Cervantes, “Ensayo á materia médica del reyno vegetal de nueva España, ó discurso sobre las plantas oficiales que crecen en las cercanías de Mexico que ha de servir de inicio en la abertura del curso de Botanica en día 28 de Mayo” (May 28, 1791), 29, WMS/Amer.81, Wellcome.
them of leaves to attempt to force them into flower, and, after years, in 1795 finally managed to gather a crop of eight fruits.

But when the seeds were planted they failed to thrive. This was pretty much the end of the line for the árbol de manitas. Sessé’s ambitions to mass produce local materia medica to “give to the Public” in this case came to a premature end. In fact, when the *Ensayo para la materia medica mexicana* in 1832 surveyed the new nation’s sovereign pharmacopeia, the árbol de manitas did not even win mention. Sessé won the illustration he sought for his planned (but never completed) masterpiece, the “Flora mexicana,” but the toluqueños succeeded with those time-honored Spanish colonial tools of stubborn intransigence and polite disobedience to preserve local control.

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437 Martín Sessé y Lacasta, “Borredores de tres cartas [de Martín Sessé a Casimiro Gómez Ortega] de 27 de enero, 27 de marzo, y de 27 de agosto de 1787” (1787), unpaginated, V, Box 1, Folder 1, Doc. 10, Real Jardín Botánico.

438 Continuing the revolving ambitions towards scientific redemption, this work was finally printed (without illustrations) in 1887 with government support. Martín Sessé y Lacasta and José Mariano Moziño, *Flora mexicana* (Mexico: I. Escalante, 1887).
The árbol de manitas by Antonio Cerda of the Botanical Expedition (1795) (left) and from Alexander von Humboldt’s expedition (date of the image is unknown and was likely drafted long after his 1801 visit to Toluca. The difference in the two drawings captures well the frustration of the expedition, for what Sessé was unable to submit to thorough examination and illustration were the seed pods and their contents.

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Figure 14: Árbol de manitas by Alexander von Humboldt

Opportunity

In Toluca, it was evident that scientific botany was a threat to a local economy and medical tradition. Although a few local officials could be compelled to comply with the mission, it was clear to residents that they had nothing to gain and much to lose by engaging with the botanical team. But others did have access to the corridors of the university and the hospitals, and, if played correctly, lucrative opportunities could be seized. It was a delicate dance.

The most successful at the gambit was one Nicolás Viana (also spelled Biana). In 1790 handbills showed up around Mexico City: “Take notice that the famous Botanist don Nicolás de Viana has arrived to succor the needs of the sick and poor who have no other recourse for the illnesses they suffer from... these must bring certification from their confessors... Thursday to Saturday from eleven o’clock to noon and afternoons four to six.” 441 This, however, was a well-planned ruse. Viana, originally from Patzcuaro, Michoacán, set himself up in front of the new General Hospital de San Andrés, which had been built with the intention to open a new page in medical practice and training in the colony and specifically to test novel medicines. There, according to witnesses, tens or even hundreds came, and Viana adopted the moniker “el Beato,” the blessed one. 442 This was a challenge to “all the gentlemen doctors and surgeons” to submit his method to the test.

441 Biana, “Date noticia de las curaciones.”
442 Daniel O’Sullivan, “Carta Circular” (1792), WMS/Amer.37, Wellcome. This was, apparently, not an entirely rare title for curanderos during the colonial era.
As Viana’s reputation grew, the city’s physicians took interest. Viana first compelled the doctors of the syphilis hospital, San Juan de Dios, to try the remedy, and then appealed to the Protomedicato for approval. This body, however, decided further testing was needed. At this time a visiting Spanish surgeon, Francisco Xavier Balmis, debarked in Veracruz, where Viana’s reputation preceded him: “The praise and the snubs that the doctors and surgeons tossed at this remedy of Viana’s came to my notice as soon as I arrived in the Port of Vera Cruz, and they only augmented in proportion with each other as I entered into the Kingdom of Mexico.” It was obvious to Balmis that both colonial doctors and the “plebe” unreasonably held the remedy to be “almost miraculous.” It was therefore time for the Creoles to step aside and let a true Spaniard sort things out. Balmis hence attached himself to Sessé’s botanical expedition and took the matter into his own hands.

Over the following two years, beginning in July of 1790, three hundred and twenty-three men and women suffering from the mal gálico underwent variations of Viana’s intensive twelve-day regime (apparently, not entirely with consent) at the Hospital de San Andrés and that of San Juan de Dios. Balmis eventually decided that

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443 Balmis, *Demonstración de las eficas virtudes*, 8.
444 Viana’s course consisted of the following:

Days 1 - 3
Induce five hours of extreme sweating
Drink the “magistral”:
- Two quartillos of pulque
- Three ounces of maguey root
- Two ounces of snake meat
- One ounce of Castilian rose
- Spread lard on feet and legs (optional)
- Drink mezcal

Day 4
enema of senna, anis, *coloquintida*, and begonia

Days 5 - 12
the more active of the ingredients was the begonia, which worked by stimulating the body, which in turn “cooks” the “virus” and expels it. Lest his readers be wary of treading so close to sex and its lusty impurities, Balmis was emphatic that this “constitutional irritation is contrary to venereal stimulation” and therefore the begonia is not a venereal medicine, but an “anti-venereal” agent (italics in original).445

It must be remembered that the city at this time was rife with patent medicines and newly rediscovered ancient cures (as described in chapters 3 and 4); in this scene, Nicolás Viana managed not merely to stand above the crowd, but capture the attention of the deans of medicine. Francisco Balmis, the surgeon, explained that what set this remedy above the fray was that it was truly Indian medicine: “as we know the inhabitants of the pueblo of Acapuácaro in Valladolid Province in Michoacán have cured themselves of venereal diseases since time immemorial with the use of [begonias] which, in great secrecy was administered by Viana and his ancestors.”446 Now, Balmis emphasized, this secret promised to deliver Spaniards from that shameful scourge of syphilis.

Nicolás Viana was playing a double game. Buried deep within his report, Balmis admitted that Viana was not at all an Indio, but a Spanish Creole. This was a detail neither he nor Viana were eager to press. In fact, Viana’s story was that “he learned [the recipe] from an Indian woman, a member of his family, who had used this since time immemorial in Acapuácaro, village of the same Bishopric, and which consisted of some

Daily doses of the “cocimiento de leño”
one and a half ounce of zarza parilla
two dracmas of sassafras, elder, and incense
one dragma of lemon and copal of Campeche

446 Balmis, 345.
roots and plants indigenous to the American soil and with which she had experience for
more than 36 years.”

Viana was a shifty one: to the medical profession, the bearer of
immemorial wisdom; to the crowds on the street, “the great Botanist.”

This was not just a matter of marketing. In order to be invited into the city’s
hospitals to demonstrate his method and aid in tests of the treatment, Viana needed to be
of pure Spanish blood. This was an opportunity never extended to members of the
castas, for a license to practice medicine of any sort still required a certificate that proved
blood purity. Thus, Viana presented himself as both a pure blood Spaniard and as an
Indian, or, at least of Indian heritage. Perhaps he was a scoundrel, using his gender and
caste privilege to steal a poor woman’s secrets and falsely claim her kinship. It is
possible. Selling secrets in Mexico City was an opportunity open to him and not to her
and all indication is that the unnamed curandera did not accompany Viana to the city.
However, it is also reasonable to imagine that perhaps there was a coordinated family
effort to bring the cure to the city. Our scorn is probably deserved, but the evidence is
insufficient. Nonetheless, patriarchy and the caste system highly structured the
possibilities for trafficking in indigenous medicines.

When testing in Mexico City was complete, Francisco Balmis returned to Spain to
demonstrate the method to his more esteemed colleagues at home. With the wearying
immodesty of the day, he put it this way: “[With] the love that I profess for man, the
distinguished confidence that I earned from [Your Excellency]; the desire that animated

\footnote{Balmis, 1.}

\footnote{That is, that “his parents are and were Old Christian Spaniards, clean of any tarnished race.” As we saw
me to be useful to my Nation, giving birth to a new branch of commerce... and other many advantages to Humanity, it is my duty... to transport to Europe medicinal knowledge of these plants despite so many dangers, discomforts, and sorrows.” Inflated with begonias, Balmis’s star rose. Before the method eventually lost the confidence of Spanish physicians, Balmis gained a reputation with his trials (successful, according to him) in Madrid at the Hospital San Juan de Dios and the Hospital General and the Hospital of the Passion. Afterward, his lengthy treatise on the remedy was widely distributed and translated. All of this elevated his public career to the highest reaches, such that in 1801 he was honored with the mandate of bringing the smallpox vaccine to the Spanish colonies – a daring expedition that won him contemporary and posthumous fame. But even before that, he ensured his own immortal legacy: “being that I was the first to transport it and make it known to Europe, and because of my diligence in perfecting its medical usage, I deserve... the distinguished honor to apply to this plant the [Linnaean scientific] name of Begónia Balmisiana.”

As for Viana and his female “family member,” it is much more difficult to discern their fates or profits, for they quickly disappear from the historical record. However, it does seem they were not entirely cheated, and once again, access and topography were the keys to control. Balmis, like many other Spaniards claiming special knowledge of the

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449 In Spain, his foremost opponent was Bartolomé Piñera y Siles. *Narración histórica de las observaciones y ensayos prácticos que se han hecho en los hospitales de Jan Juan de Dios, General y Pasión de esta Corte, para examinar y comprobar la virtud antivenérea de los simples americanos agave o pitay begonia* (Madrid: Benito Cano, 1793).


451 Balmis, *Demonstración de las eficaces virtudes*, 343.
Americas, held up experience as the sin qua non of true knowledge when he returned to Spain: if you weren’t there, you wouldn’t know. In this way, he lambasted his European detractors for being unable to discern the great variety of maguey and begonia from the colony. “Even Linnaeus” got many of them wrong. Balmis clarified the matter: “it was initially believed that this begonia was the same plant that Dr. Hernández describes, named *Totencoxôxôcollîn* … but it was then discovered that ours is a *new* species that grows in Ocuila and Acapuácaro, and the naturales there free themselves of gálico with the powder of this root... This was the plant used by Nicolás Viana.”

With such diverse topography and such narrow range, of course armchair botanists were not up to the task.

Balmis, however, was quite wrong about the distribution of his namesake begonia. The *Begonia balmisiana* has a wide range in central and western Mexico and grows wild in Jalisco, Guerrero, Puebla, and Morelos in addition to Mexico State and Michoacán. In other words, Nicolás Viana must have convinced Balmis that the key ingredient had to be supplied from his home town, much as happened in Toluca. There is no record of Balmis traveling to Patzcuaro or its environs. The expedition leader Martín de Sessé however passed there in 1790 while Balmis was conducting hospital trials in Mexico City. As a close associate and himself the director of the Hospital of San Andrés where the trials were completed, Sessé would naturally have been seeking the

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452 Balmis, 341.


454 Wilson, “Scientific Aspects of Spanish Exploration in New Spain During the Late Eighteenth Century,” 56.
famed begonia. Nonetheless, even after his visit and traveling through the Begonia balmisiana’s native range, Sessé remained convinced that the local variety was unique and endemic to the area. Forty years later, the *Ensayo para la materia medica mexicana* continued to direct readers only to Patzcuaro and Ocuila.\footnote{Academia Medico-quirurgica de la Puebla de los Angeles, *Ensayo para la materia medica Mexicana, arreglado por una comision nombrada por la Academia Medico-Quirurgica de esta capital, quien ha dispuesto se imprima por considerarlo util*, 6.} With a monopoly on supply, therefore, Patzcuaro made quite a windfall when Balmis left for Spain in 1792 with 750 pounds of dried begonias.\footnote{Balmis, *Demonstración de las eficaces virtudes*, 19.} Beyond this payday, it is warranted to speculate that a more steady stream of begonias fed the urban markets; that the archives are silent about these is unsurprising, even expected. Maybe Viana wasn’t a scoundrel after all.

To conclude, the medical knowledge of one Indian curandera travelled far. As a local healer, Viana’s Amerindian family member gathered from and adapted local medical practices to forge her own identity as a curandera, and as a successful one, her fame exceeded her small village of Acapuácaro. However, racially, gender-wise, and perhaps financially, she didn’t have the social or spatial mobility to venture beyond the regional county seat of Patzcuaro. But with access to open roads and at least some of the guarded, elite spaces of the ruling caste, Nicolás Viana took the same recipe and launched his own career as curandero in Mexico City and, perhaps, profited handsomely by convincing the medical elite of his unique botanical source. And then, Francisco Balmis took “Viana’s method” and used it to rise to globe-circumnavigating stardom and the immortality of plant catalogues, botanical gardens, and herbaria.
Ignorance

The Royal Botanical Expedition was intended to be a mission for knowledge – for light to overcome darkness, for self-realization over blind wanderings in superstition, for, in a word, science. But the expedition could result as well in ignorance and astounding losses of knowledge. Nowhere was this more evident than in the distant borderlands and frontiers. In places like Toluca, local gobernadores might have sufficient power to twist arms to win cooperation; access to urban markets, as well, could inspire intermediaries to participate in imperial scientific efforts, as in Viana’s case. On the scarcely known frontier naturalists were even more dependent on experienced locals to lead them to the rarest specimens; to explain the plants behavior in other seasons; to gather seed, flowers, leaves; to explain its uses, recipes, and dangers. But, where Spanish power was weak and ephemeral, where there was little incentive to share knowledge, all of this was more difficult to attain. It was not always like this, and different spaces could yield different outcomes. Ultimately, though, the mission of science and the concomitant efforts to reform the colony as often led to the loss of knowledge as it did to acquisition and learning.

Ignacio de Pérez y León was one of the first graduates from the program in botany begun by the expedition’s Vicente Cervantes at the Botanical Garden in Mexico City. The garden itself had been created to serve as a way station for specimens and illustrations bound for the Royal Botanical Garden in Madrid, but it was intended to be headquarters for scientific study in the colony, one that would be directly responsive to
Spain. However, at least in the expedition’s representation of things, upon arrival they found medical practice in the colony so behind the times and below par that the expedition took on the added responsibility of schooling the Creoles in the ways of modern science. Regarding physiology, they bemoaned the Creoles’ persistent reliance of outdated Hippocratic theory of bodily humors, in regards to clinical medicine, no one was more singled out for scorn than the colony’s pharmacists: “The doctor doesn’t know what to prescribe, the pharmacist is ignorant of what he dispatches, and the rustic herbalist that barely knows how to read, grabs whatever plants his caprice dictates; of this fortune prepared medicines rarely aid health, quite the contrary causing death, the result of the ignorance of them all.” This sparked an enduring and vitriolic quarrel between the expedition members and the local Royal Protomedicato, which was now cited for failing to uphold medical standards. With royal support, therefore, Cervantes gained appointment as the new cátedra (chaired professor) of botany, and his courses were now mandatory for all medical students.

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457 José Mariano Moziño, Noticias de Nutka: diccionario de la lengua de los Nutkeses y descripción del Volcán de Tuxtla, ed. Alberto M. Carreño (México: Sociedad Mexicana de Geografía y Estadística, 1913), XIX–XXIII.

458 Sessé and his close colleagues José Mariano Moziño and Luis Montaña were instead enthusiasts of Scottish physician John Brown’s theory of nervous stimulation. John Brown, Elementa Medicinae, trans. Luis Montaña (Mexico: Mariano de Zúñiga y Ontiveros, 1803); José Joaquín Izquierdo and John Brown, El brownismo en México un estudio crítico, seguido de la primera edición de la versión castellana que hizo en México hacia 1800, el doctor Luis José Montaña, de los Elementos de medicina del doctor Juan Brown., trans. Luis Montaña (México: Imp. Universitaria, 1956).

459 Cervantes, “Ensayo á materia médica,” 4r.

460 This was a lengthy conflict, too much to be fit in here. See, Lozoya, Plantas y luces en México: la Real Expedición Científica a Nueva España 1787-1803; Morales Cosme, El Hospital General de San Andrés: la modernización de la medicina Novohispana 1770-1833; Engstrand, Spanish Scientists in the New World.
At the garden, Cervantes promoted the Linnaean method with evangelical zeal. His course was added to the usual medical curriculum, but he was also more visionary than that. He wanted to use botanical classification to foster a society with a self-realized relation with the nature about them. This mission was advanced through public demonstrations, aimed to “inspire the youth to botanize”\textsuperscript{461}: “not only will the public enjoy the useful teachings, but also the beauty of this delicious art.”\textsuperscript{462} The opening ceremony of the garden was one such spectacle, where, after a fireworks show, the audience was presented three papaya trees: “Two female trees adorned with their flowers and fruits of various sizes indicating that how these usually are seasoned by the male tree, which, in the center, emits sparks directed at the females, indicated the perfection with which the Pollen is transported through the air in all the plants of this class to fertilize the females.” Above this arboreal orgy, a banner read, “AMOR URIT PLANTAS,” – love ignites plants.\textsuperscript{463}

Ignacio de León was one of these supposedly inspired youths lit up by the love of plants and encouraged to venture yonder and catalog the viceroyalty. Stationed as resident pharmacist in Fronteras (also known as Santa Rosa de Corodéguachi), the first garrison constructed to form the cordon against the Apaches (more below), León y Pérez’s early enthusiasm for the botanically virgin territory quickly dissolved into

\textsuperscript{461} Vicente Cervantes et al., 	extit{Exercicios Publicos de Botánica Que Tendrán En La Real y Pontificia Universidad de México} (Mexico: Heirs of F. de Zúñiga y Ontiveros, 1793), 1.

\textsuperscript{462} Cervantes, “Ensayo á materia médica,” 4v.

\textsuperscript{463} Quote is from Antonio de Ramírez y Alzate’s \textit{Gazeta de Literatura}, as quoted in Moziño, \textit{Noticias de Nutka: diccionario de la lengua de los Nutkeses y descripción del Volcán de Tuxtla}, XXVI. This ceremony is described in much greater detail in Rick López, “Nature as Subject and Citizen in the Mexican Botanical Garden, 1787-1829,” in \textit{A Land Between Waters: Environmental Histories of Modern Mexico} (Tucson: University of Arizona Press, 2012), 73–99.
frustration. For all the talk in Mexico City about the botanical bounty yet to be discovered beyond civilization’s pale, the frontier in Sonora turned out to be a lousy place to botanize.

Figure 15: Fronteras marked by author on Nicolás de la Fora, “Mapa de Toda La Frontera de Los Dominios Del Rey En La America Septentrional, 1771,” image, Library of Congress, Washington, D.C. 20540 USA, 1816. https://www.loc.gov/item/2001622423/. Note in this map the strong division made between settled zones of settlement, where human landmarks are visible and named, and unsettled territories which are empty. Fronteras is on the edge of these distinct zones. This distinction will figure below and can be compared to Antonio de Alzate’s map in the introduction.

Surrounded by riches, León y Pérez longed to botanize, but conditions on this frontier stymied his desires. No one would talk to him, even in the surrounding village:

The pharmacy is a waste, for being this area small and inhabited people very estranged from the use of medicine and true practices, the surgeon and I have had to tolerate much derision, scorn and infamy from the pueblo because of the efforts of one insolent and cocky curandero to persuade [the people] of our total lack of
expertise. The curandero’s cheerful opinion is supported by the natural crudeness of all these people, resulting in great damage and confusion. And moreover, [we even have to fight] for the respect of the Señor Comandante (the fortunate bastard). I am persuaded that round here the people are of the high opinion that the medications of the pharmacy can be very harmful because they are unknown.

The curandero’s popularity and power among both Amerindians and Spaniards suggests that a reasonably stable local medical culture had developed in the five decades since the fort was established. This centered on one or perhaps a few curanderos whose origins and background we do not know, but with whom the village residents and even the soldiers were satisfied. Within this milieu, León y Pérez was a pariah, and even his own commander found his presence an inconvenience.464

This did not bode well for botanizing. And indeed, León y Pérez never did overcome the obstacles. With no social capital among the locals, Léon y Pérez looked further afield, beyond the palisades. There, in the Creole imagination, resided the barbarians that still maintained the ancient traditions. However, León y Pérez’s own fort was established specifically to make war with these, the Apache in particular: “I do not want them to tell of me what they tell of that friend of Our Linnaeus who [met an early end], without telling the world even an eighth of what he learned of botany; I want to preserve myself and learn despite my rudeza.”465 The commander of the presidio, don Pedro de Nava, denied his pleas for military escorts on the grounds that no soldier’s life was worth such a meaningless endeavor. When he finally did manage to leave the fort

464 Such was the commander’s disregard that he forced León y Pérez and the surgeon build their own facilities.

465 Ignacio de León y Pérez, “Carta de Ignacio de León a Martín Sessé informando haber recibido el título de correspondiente y las dificultades encontradas para realizar los trabajos de campo por falta de escolta” (Letter, November 27, 1792), V, Box 1, Folder 3, Doc. 17, Real Jardín Botánico.
with a group of soldiers, they were bent on pillage and destruction, and botanizing in their wake was a futile effort.

The results of his efforts was a pittance of the region’s biodiversity. The twenty to thirty species descriptions and seeds he collected\textsuperscript{466} to send back to Martín de Sessé in Mexico City represent a minor share of the currently recognized flora of the northern Sierra Madre Occidental.\textsuperscript{467} But more striking than the number of specimens collected is the great loss of botanical knowledge through the process. Seeking to impress his former teacher (who, León y Pérez was hoping, might be able to secure him some kind of more advantageous appointment not on the frontier) León y Pérez employed his well-trained eye to note all the specificities germane to accurately fitting each specimen into the universal system of classification devised by Carl Linnaeus. León y Pérez was, after all, a missionary of a different ilk. This universal, scientific language – at least in León y Pérez’s own imagination – was first devised in Uppsala, then gained acceptance by the most learned societies of Europe, was then endorsed by the Spanish King’s head botanist, carried across the Atlantic, the Caribbean and the gulf, and by horse and mule up to the altiplano of Mexico City. And now it was his honor and duty to deliver it into the unstudied terrain of the borderlands. To be a participant in this global project of cataloging the world, his training taught him discern with the unaided senses the shapes of each plant’s pistils, stamen, corolla, calyx, roots, branching patterns, et cetera. But however much he might have excelled at precision and detail, he failed at the level of

\textsuperscript{466} It is impossible to determine exactly how many were sent because of the nature of the sources.

comprehension and meaning. Each of his painstaking descriptions (save one) ended with a record of his own profound ignorance: “The Indians have no name for this.”

Six months later, nothing had changed: still no escort, still poking about the walls of the fort. “Now things are worse, and my return to Mexico or at least getting the hell out of this land has become even more difficult. I am so miserable that if God doesn’t fix this by giving me another posting I think I’ll commit an attempt.” León y Pérez did not specify what kind of attempt, but we can use our imaginations. As he saw it, the root of his problem was the intendancy system. While viceroy Revilla Gigedo famously supported the Botanical Expedition and the sciences, León y Pérez was “not his subject,” but that of the “señor comandante of the Western Provinces,” whose mandate was limited to securing the northern border. In any case, although it was his “only condolence,” León y Pérez’s botany ended there, defeated by military priorities. Nothing more came from him, though if his mind did drift towards an “attempt,” we know he survived it to serve the crown in another, also doomed way, this time in the fight to save the empire from the independence movement.

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468 The one exception was the “yerba de la rabia,” which he declared the indigenous designation. This miraculously cured rabies and venomous bites, induces menstruation, eases childbirth, cures gonorrhea, increases women’s fertility, helps all nervous diseases and “in sum is known in this land as the universal medicine.” The length of this list and the concerns it reflects (specifically about delayed menstruation and nervous diseases) make it evident however that even if yerba de la rabia was an accurate translation of the local native name, this information came from the experienced use of the plant within the fort. León y Pérez, “Carta de Ignacio de León a Martín Sessé informando haber recibido el título de correspondiente y las dificultades encontradas para realizar los trabajos de campo por falta de escolta,” unpaginated.

469 Ignacio de León y Pérez, “Carta de Ignacio de León, correspondient del Jardín Botánico de México, a Martín Sessé solicitando una recomendación para trasladarse del valle de Santa Rosa al no poder herbolizar por falta de escolta” (March 28, 1793), V, Box 1, Folder 4, Doc. 10, Real Jardín Botánico; Ignacio de León y Pérez, “Carta de Ignacio de León, correspondient del Jardín Botánico de México, a Martín Sessé, donde le cominica que ya tiene escolta para sus trabajos de campo y el resultado de los mismos” (April 30, 1793), V, Box 1, Folder 4, Doc.15, Real Jardín Botánico.
León y Pérez’s dearth of ethnobotanical knowledge deprived his work of any significance. With insufficient knowledge of the virtues, habits, and habitats of the plants, he remained unaware of the sort of details required to assign them precise names of genus and species. In the end, his botanical descriptions lack both scientific and common names; this rendered them useless, both then and now: they had no place in the final compendium of the expedition’s work, and even today it remains impossible to identify almost any of them. Without native intermediaries, there was nothing to learn and no way to name the fruits of the frontier.

The surprising thing about León y Pérez’s failure is that it was built upon such promising precedents. It is important not to romanticize the missionary regime under the Jesuits as one of cooperative and productive development between men of the robe and indigenous inhabitants – after all, parts of northern Sonora were blackened by native uprisings in 1726, 1734-1735, 1740-1741, and 1751 even before the expulsion of missionaries in 1767. Yet still, Jesuits on the frontiers in Sonora and New Mexico had permitted, and even promoted, active exchange between of European and local medical traditions, especially the incorporation of native *materia medica* into the missions’ *boticas*.

European pharmaceuticals were nearly impossible to supply to frontier outposts, and when they did arrive they were commonly in a decrepit state. In reaction, the missionary orders produced the majority of medical manuals printed in the Americas before independence. These were published to inform enterprising missionaries as to

how to adapt well-known and proven remedies to the resources of the desert, the jungle, the mountain, or chichimecaría (“wild peoples’ lands”). The most successful in the eighteenth century was Juan de Esteyneffer’s *Florilegio medicinal de todos los enfermedades* (first edition was in Mexico City in 1712, with reprints in 1719, 1723, 1729, 1732, 1739, 1755, 1853, and 1887). With the authority of thirteen years in the missions of “the provinces of Topia, Sinaloa, Tepehuanes, Tarahumara, Sonora, and California,” Esteyneffer’s book was more a survival manual than a household book. For those Rambos for Christ who with “intrepid spirit, undaunted by epidemics and plagues, ranging on the untrodden path, clean and irrigate their own wounds like a Surgeon, and apply their own medicine like a Doctor,” Esteyneffer provided a handy reference guide on how to purge black bile, rid the body of worms, or deliver a baby. His effort was highly appreciated. According to the endorsement by fellow missionary Juan Francisco de Casteñada (in Brazil) appended to the 1755 edition, by mid-century, the book was widely disseminated from Potosí in Peru to the northernmost missions in California. In 1790, New Spain’s chief medical officer, protomédico Juan Manuel de Venegas, reaffirmed the great popularity of the tome.

The *Florilegio medicinal* was part of a long tradition of missionary and counter-insurgency how-to manuals that prepared the frontiersman for the exigencies of the

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471 The Hispanicized version of Johann Steinhöffer.
472 Esteyneffer, *Florilegio medicinal, de todas las enfermedades*, unpaginated frontmatter.
field. But Esteyneffer sought not to push the frontiers of medicine; rather, his assumption was always that the real-world frontier was an unfortunate place to be in terms of gaining credible medical attention and that, after pleading succor from the appropriate saint, everyone out there needed to be their own medical MacGyver. Such an orientation permitted the widespread adoption of elements of local, indigenous medical practice, and Esteyneffer endorsed many: “salvia chicura (as they call it in Sonora),” oyvari, comeme, “what they call xua in the Opata language,” joxoba, tepeguaje, and others. In fact, according to the Jesuits, Sonora could be self-sufficient, providing for the medical needs of all within it. In 1764 the German Jesuit Juan Nentvig announced proudly that “The providence of nature or should I say the Divine Providence, has endowed Sonora, devoid of physicians, surgeons, and apothecaries, with excellent medicinal herbs, shrubs, gums, fruits, mineral and animal products of such quality that there is no collection like it in Europe.” In sum, there should have been a wealth of useful new medicines for León y Pérez to discover on the frontier.

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474 A few other examples of the genre include: Benavides, Secretos de la Chirugia; Hernández, Quatro libros. De la naturaleza, y virtudes de las plantas, y animales, que estan receuidos en el uso de medicina en la Nueva España, y el metodo, y correccion , y preparacion que para administrarlas; López de Hinojosos, Summa, y recopilacion de chirugia, con un arte para sagrar muy utel y provechosa; Vargas Machuca, Milicia y descripcion de las Indias; López, Tesoro de medicina; Fray Agustin Farfán, Tratado breve de chirugia y del conocimiento de cura de algunas enfermedades q. en este tierra mas comunmente suelen aver (Mexico, 1579); Barrios, Verdadera medicina, cirujia, y astrología, en tres libros dividida; Baltasar Dorantes de Carranza, Sumaria relacion de las cosas de la Nueva España .... (Mexico: Museo Nacional, 1902).

475 Nentvig, Rudo Ensayo, 43.

476 It is impossible to determine with any degree of certainty the pre-Hispanic herbal pharmacopeia of the O’odham, the Tarahumara, the Seri, Yaqui, and other native groups in northern Sonora. The problem is that the very sources that I view with a critical eye here are the only existing historical sources beyond oral traditions. Modern day ethnographic research reveals a bountiful herbal repertoire; Irigoyen-Rascón describes 194 different plants used by the Rarámuri alone. However, this and other ethnographies also includes many elements that very clearly derived from either European traditions or from Nahuatl ones (via the missionaries). Nonetheless, evidence suffices to indicate a strong pre-Hispanic herbal tradition. Between Esteyneffer, Nentvig, and the relaciones geográficas of the region, some 45 to 60 herbs are described (it is very difficult and mostly impossible to cross reference these due to the many and
Not only was there much more to find, but there already existed networks and pathways through which knowledge and medicines were changing hands. The ouster of the Jesuits in 1767 likely destroyed some of these, but others that would have survived. For instance, in response to the king’s request for information about the natural resources of the frontier, the missionaries on the Yaqui River explained the diligence with which they “questioned the intelligent people and the female healers regarding for what conditions each is beneficial... the explanations that each gave are detailed here.” This suggests that when the Franciscans occupied the Jesuits former missions, they continued and maintained relations with indigenous curanderas. Nentvig described the local arrangement: “These products have been discovered by the Indians and the old Spanish women who have set themselves up as a sort of royal tribunal of medicine.” Spanish women were not particularly plentiful. The frontier population largely consisted of soldiers, missionaries, and miners, most of whom considered their northern sojourn a temporary life-stage. Although it is not likely that much more evidence exists to track overlapping names, hence the range).


477 Make a report “De las Hierbas, Raices, y Semillas medicinales, como de las que son venenosas; los usos de aquellos segun la experiencia que se tenga,” requested Charles III. Compendio de las noticias que S.M. por su Real Orden de 20de Octubre proximo pasado ordena que se puntualizen para el completo conocimiento de la geografía, física, antiguedades, mineralogía y metalurgia de este Reyno de Nueva España y instrucción sobre el modo de formarlas, conatencion á la falta de proporcion para practicarlo, con observaciones proprias al intento, de modo que sea un equivalente que pueda suplir á la falta de instrumentos y de profesores (Mexico: En la Imprenta nueva madrileña de D.F. de Zúñiga y Ontiveros, 1777).

478 Joaquín de Amarillas, “[Relación de los arboles y yerbas medicinales de la misión del Río de Xiaqui]” (1783), WMS/Amer.50, Wellcome.

their lives, it appears that in the absence of an authoritative medical profession a very small female minority managed to set themselves up as the gatekeepers between native purveyors and Spanish consumers. Shut out from the local medical culture, Ignacio de León y Pérez missed all of this.480

To understand why we must dig deeper into the complexities of frontier modus vivendi and how this was changing in the last decades of the 18th century. As in other frontier regions in New Spain and elsewhere in the Spanish Americas, and like the hospital-building orders explored in chapter 2, the Jesuit missions in Sonora saw the body as the gateway to the soul. After all, what greater proof could you ask of the righteousness of the mission than that God cleared the way for his apostles with deadly plagues such as smallpox and cholera? Local indigenous groups were at times receptive to these explanations of the epidemics – epidemics that their own leaders and shamans had been so powerless to prevent.481 Additionally, Christianization was believed to be not merely a matter of free will, but a holistic lifestyle transformation into sedentary, polite, and pious believers. Health was a significant aspect of this and evangelists used the appeal to health to draw converts. But they also saw the Christian way of life of producing all at once healthy bodies and saved souls. Therefore through the end of the colonial era hospitals were a standard installation in the missions of California, New Mexico, Sonora, and Texas (see chapter 2).

480 Unfortunately the poor quality of León y Pérez’s descriptions and his ignorance of any common names for the specimens makes it impossible to correlate his findings with those of Esteyneffer or even modern guides.

Such a unified approach to the spirit and body invited deeper forms of hybridity and cultural confluences than the mere trade in plants. This was particularly true in frontier areas where, since the Spaniards first heard stories of the dreaded Chichimecas ("barbarians") from the Aztec lords, it was believed the devil’s power was greatest. In common Christian cosmology, the America’s were entirely under the Satan’s spell until Columbus carried the true religion across the ocean. Far from the colonial capitals, lucifer was still more present and more dangerous. The presence of such evil called for heightened vigilance and paranoia. But it also had the paradoxical effect of validating the active and efficacious intervention of the preternatural beings revered by the Indians and this lead to surprising moments borrowing. Entries in Esteyneffer’s book for treating pesadillas, apoplexia, pasmo, and other forms of madness (occupying most of the first 40 pages), for instance, demonstrate both the immediacy of witchcraft and hybrid solutions: “A very experienced remedy against curses is a root brought from New Mexico that is called Chacaana; one having been bitten by witchcraft takes a bit in water or in wine; if a part of the body has been cursed, wet the area and then apply the root chewed up.”

Some of these situations of exchange were in many parts of the frontier sundered by the time León y Pérez arrived in 1792; in fact, he was assigned to the border to contribute to the process of their destruction. The expulsion of the Jesuits from all Spanish territories by Charles III in 1767 initiated a significant militarization of the northern borderlands. Quite literally, in May of that year four squads of dragoons, two militia units, and one infantry unit marched themselves into the missions of Sonora and
marched the friars into the prison in Guaymas. It was a long time in coming. Tensions had always persisted between the crown and the religious orders whose allegiance lied elsewhere. But with the general perception of imperial decay and muscular reform ambitions, the Jesuits stuck out as a problem and a scapegoat. The Society of Jesus operated largely autonomously, especially in frontier regions, and at times in direct conflict with royal interests. The friars much greater knowledge of and relations with Native American groups compared to royal agents allowed them to snub, ignore, or just blatantly violate the orders and ambitions of Spain. The Jesuits were a global network and the center of this network was not Madrid. If Spain was to regenerate its empire and find ways to turn its vast realms profitable, it would need to take back the borderlands.

Mission-building a was painfully slow form of colonization. By 1767 the Jesuits had been at it in Sonora for 160 years and there was no indication that the process was approaching completion and that the land and its people had been delivered to God. River systems could mostly be said to have been conquered, as they functioned well to unite the outposts with more settled parts of New Spain. But beyond these, hundreds of miles could lay between missions that dotted a landscape over which the Society of Jesus had no effective authority. Charles III’s frontier policy was more headstrong and strident. The king looked towards the policies of north European empires for inspiration for colonial reform, and, at least concerning Sonora, this amounted to deeper investment in settler colonialism. Inspiring land-occupying colonists, however, required control over

vaster spaces and a more secure peace that would allow them to venture from the presidio into ranchland and distant mining territories. Settlement required a new military policy.

This policy was to cordon off regions of control and regions of wilderness with starker boundaries than was common in the Jesuit era. Garrisons (presidios) had long present in the region; since the uprising of the Puebla in 1697, they defended missions and the minor towns supporting the mines. But now in the Bourbon era, the operations, theory, and intention of controlling the frontier shifted. Previously, missions, mines and presidios were points of control on a system of riverine and mule trail networks. After the Jesuits’ expulsion new garrisons were formed in a rough, lateral line (a bit south of the current U.S.-Mexican border) to provide a cordon of defense. Pockets of resistance persisted within the cordon (notably in the Cerro Prieto), but the idea was to create a bifurcation of space between a true wilderness and a colonial territory – with hostile Indians held north of a line of defense. This difference of imperial intention can be clearly observed by contrasting the maps of Villaseñor and Alzate in the introduction: Villaseñor presents an empire of networks, Alzate, an empire of spaces. As Samuel Truett labels it, this was a transition from the borderlands as an expansive space of contested authority, towards a frontier or border regime, presaging the coming age of territorial nation states.483

León y Pérez’s garrison at Fronteras was part of this new border regime. But just as it separated Spanish territory and non-Spanish territory, Léon y Pérez similarly found an unbridgeable chasm between his learned science and the functional medical culture

forged over the prior decades. A more perceptive and charismatic pharmacist probably could have done better than he, but his failure was not all his own fault. The transformation of the border, and the power of local healers, shut him out from local networks. The result was more ignorance, not more knowledge.

**Conclusion**

The ideological and institutional inventions identified in chapter 3 and 4 that supported this culture of “Indian medicine” inspired new relationships between the colony’s most learned men and Amerindian subjects. Not since the 16th century had doctors and intellectuals cruised urban markets, rural villages, and distant missions in search of the medical wisdom of Amerindians. Now they found themselves in the uncomfortable position of backtracking on centuries of disparaging native healers in the hopes of enticing these to share their knowledge of healing the body.

These Spaniards were quite self-consciously attempting to overcome centuries of self-inflicted ignorance. Londa Schiebinger identifies four factors that led to the astounding loss of natural knowledge in the colonization of the Americas: the demographic collapse of indigenous populations, enslavement,\textsuperscript{484} secrecy on the part of colonized peoples, and prejudice.\textsuperscript{485} The men studied in this chapter were very intentionally trying to overcome each of these obstacles, to reach beyond them in space

\textsuperscript{484} She is referring to Caribbean plantation slavery, but coerced labor in New Spain was common as well.

\textsuperscript{485} Schiebinger, *Secret Cures of Slaves*, 158–64.
and time. And they had successes. But the legacy of imperialism was weighty and social relations could not be redrafted on whim.

Much stood in the way of crossing borders – especially the constant creation of new ones. The militarization of space was one kind of renewed border; the distinction between science and superstition another. Certainly, though, the most urgent one was the dichotomy between the wild Indian and the over-civilized Spaniard. It was a dualism the scientists were forever reproducing – it was elemental to their purpose and their method. Profit came from the invention of new bridges, bridges that not only connected, but also bypassed or spanned over the messy rift-zone of miscegenation and plebian hybridity. This is what the naturalists tried to complete. And this is what Nicolás Viana so skillfully maneuvered. For many indigenous and other subaltern groups, the bridge was eyed suspiciously, but if they could control the gate, it might yield profits both material and political.

Negotiations were tense. As we have seen, these Spanish men were frequently rebuffed, and, as in the case of Ignacio de Léon y Pérez, their credentials counted for nothing far from the capital. In an unfamiliar land, they were easily outmaneuvered by curanderos and curanderas with a local following among Spaniards and Amerindians. Strong arm tactics were used where possible, and pocketbooks were emptied, but in the end it was a seller’s market. Generally, it was up to native healers and their allies (or perhaps enemies) to decide when their conditions were met. It was easy for them to walk away from a deal, leaving the botanist in the lurch.

Others jumped in to take advantage of the scientists’ social isolation. Nicolás Biana, like José Flores’s priest-informant in chapter 4, was one such middle-man and
profiteer. Patriarchy and the caste regime placed a gulf between the curanderas of Michoacán and Spanish society in the capital, and allowed him the mobility to capitalize on the breach. He was not likely one-of-a-kind; he was just wildly successful, and hence is present in the very incomplete historical record. It is difficult to tell if Biana was a local hero or a scoundrel and a scammer; and if there were others like him, which is probable, they too were likely morally ambiguous figures.
Conclusion

The story told in these chapters is not merely about lizards, begonias, and a few naturalists and curanderos. Rather, the fetish of Indian medicine began with the most fundamental question that dogged the Spanish monarch: how does one turn a profit on an empire? In the 16th century this was still an open question. Pillage came first, then forced labor. These, however, were short-sighted plans, because treasure and bodies both soon proved to be finite.486 Thus the scientifically curious King Philip II dallied with other possibilities.487 Along with alchemy and astrology, he surveyed his vast realms in search of marketable products (through the relaciones geográficas) and sent his Royal Physician to explore the feasibility of an empire of medicine.

The idea of an intentionally hybrid empire was yet a possibility. As we witnessed in chapter 1, Francisco Hernández and Bernardino de Sahagún struggled to find ways of cleaning and validating indigenous knowledge, settling on experience as a way to transcend culture and spiritualism to find an non-suspect common ground. José de Acosta intellectualized this artifice by dividing earthly life between “natural history” and “moral history”: he argued that Spaniards and Indians had a common experience of the former, although Indians were horribly mistaken about the latter.

In the higher intellectual and official realms, a belief in these possibilities of syncretism was not long held, and medical orthodoxy became a renewed priority. By the end of this

486 The latter, forced labor, because of the decimation of the indigenous populations by sword and germs, resulting in the importation of African slaves, especially to the Caribbean.

century, revenue came to rest on two pillars: extracting precious metals and collecting tribute. Accordingly, the 17th century exhibits no comparable attempt at controlled, intentional medical hybridization. This is not to say that hybridity was not rife. The scholarship is abundantly strong that however much Spaniards imagined a world of neatly divided castes, the reality was something quite different. But, to repeat the caveat of the Introduction, this dissertation is not a study of medical hybridity. It is rather an examination of the idea of medical hybridity and the politics of this idea in the empire. And this idea was absent for most of the 17th century and into the 18th, what is usually called the Baroque period.

Then the idea arose again, first in spurts and then forcefully, in the second half of the 18th century. It coincided with a wider shift in how the crown and the Council of the Indies imagined the future of the empire. The rise of the Dutch and the British empires, the recent foibles of the Armada, and the persistent bankruptcy of the war chest inspired the hope that *comercio libre* (free trade) could revitalize the empire’s finances. Belief in free trade compelled the imperial policymakers to newly value human capital; in a word, all those countless vassals, if well managed, could be mobilized as producers and consumers in a mercantile economy. Accordingly, Charles III revitalized two signature projects of Philip II. First he launched a survey of the products of the land, rehashing the *relaciones geográficas* of the 1570s, and then he sent the Royal Botanical Expedition to rekindle Francisco Hernández’s prematurely aborted project. At stake in both was how to profit from the knowledge of Amerindians.
The new enthusiasm was not only a royal prerogative; rather, it first emerged within the colony. What we have been identifying in the pages of this dissertation is a greater, more general shift in the idea of the Indian in colonial society. As Rebecca Earle and David Brading have written, Enlightenment New Spain witnessed a new mythologizing of the Aztec in what were often quite convoluted attempts by Creole elites to define a distinct political heritage for their American colony. But also, such transformation happened in much wider realms that the whimsy and folly of elite men. Martha Few and Silvia Arrom, for instance, have underscored that at the core of the Bourbon reforms was a new impulse towards population management.\textsuperscript{488} Amerindians, real and imaginary, became the objects of public health initiatives that sought to spread new methods (especially inoculation) and suppress “unhealthy habits” in ways that often mirrored the efforts of earlier anti-idolatry extirpators. This was indeed a radical change in the relationship of the colonial state to its indigenous subjects.

The basic shift was towards including the \textit{Indian} within the novel concept of \textit{society}. On this, historians often follow the French philosopher Michel Foucault, who compellingly argued that the Enlightenment notion of \textit{society} was coupled with the assertion of state dominion over the bodies of subjects and the penetration of medical authority into the interiority (mental and physical) of patient.\textsuperscript{489} These tendencies can be witnessed in the pages above in the renovation of the Indian Hospital, which brought

\textsuperscript{488} Arrom, \textit{Containing the Poor}, 32–39; Few, \textit{For All of Humanity}, 197–201.

greater secular control over the lives of the indigenous infirm, placed their bodies on the stone for dissection, subjected them to drug tests, and enveloped their traditions to exert control. In epidemic campaigns near the turn of the 19th century, more evidence can be gathered for Foucault’s hypothesis.

But, as David Tavárez writes, the match is imperfect. His reservation is that the bureaucratization and medicalization of the Indian subject was uneven, fragmented, piecemeal, open to retrogressions and resistance, and never complete. I add that more importantly there were two conceptions of society, and intellectuals attempted to apply both of them to (at least some) native subjects. Thus, they concurred with royal advisors that, “The principal asset of a kingdom without doubt consists of the population of men,” and criticized that “silver [and] gold are only conventional riches.” However, they referred not only to productive power of the collective of persons, but also the potential potent agency of a mobilized, self-realized society.

Indians and their knowledge were, or could have been, or might have become, New Spain’s secret weapon. In the emerging sense of a global public sphere, in which New Spain and its intellectual class had reputations to maintain, indigenous knowledge was a secret fount of scientific truth. And bringing it forth would be a service to New Spain, to the king, to science: “to the good of long-suffering humanity, and to the honor

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490 Tavárez is specifically writing about the use of medical examinations in Inquisition trials against curanderos and curanderas, which he dates from the 1730s. Nora Jaffary likewise writes that by the 1750s medical examiners became a much more common sight in the court for trials against alumbrados (mystics, the illuminati). Tavárez, The Invisible War, 254–56, 270–80; Jaffary, False Mystics, 99.

491 Foremost among these, Pedro Rodríguez de Campomanes.

492 Alzate y Ramírez, Asuntos varios sobre ciencias, y artes, nos. 12, unpaginated.
of a nation that enjoys a soil so abundant in nature’s bounty, as it is in outstanding geniuses."\textsuperscript{493} It was greatness bottled since the Old Testament.

This sentiment was strongest, or at least most loudly articulated, amongst the colony’s most visible culture producers, men of letters whose writings were enshrined after Independence and whose memory has since become a textbook part of Mexican nationalism.\textsuperscript{494} These were also the leading men of science in the colony, the self-declared vanguard. To be clear, this was an uncommon sentiment in the colony. As David Weber writes, the relations between Spaniards and independent Amerindians in this period “can be understood only in the plural… [since they] took many forms, changing with time and circumstance.”\textsuperscript{495} The sense of an endowed, empowered, agentive society detailed in chapter 4 was a minority view, but a highly influential one. As these men began articulating the first inklings of Mexican-ness, of a bounded, territorial identity, it was not only in the backward-looking, corrective terms of mistreatment and retribution; it was also a giddy feeling of potential, of almost magical possibilities. Mexico was not belated justice, but a bright new future.

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\textsuperscript{493} Academia Medico-quirurgica de la Puebla de los Angeles, \textit{Ensayo para la materia medica Mexicana, arreglado por una comision nombrada por la Academia Medico-Quirurgica de esta capital, quien ha dispuesto se imprimia por considerarlo util}.

\textsuperscript{494} The long and deep resonance of their ideas about indigeneity and imperialist nostalgia can be traced in Earle, \textit{The Return of the Native}, chapter 5.

Spanish men of letters on both sides of the Atlantic were well integrated into the trans-imperial flows and exchanges of information that gave shape to the Enlightenment. But in many ways the appeal of indigenous medicines was a Spanish development. The specific structures of public health and their role in imperial expansion shaped the field of medical care and the challenges of medical professionals as they attempted to assume responsibility for the health of society. The ideological importance of charity and zeal, the medical traditions of the religious orders, and the widespread disdain for the medical professions shaped the patterns of public health in the Enlightenment colony. And the preponderance of medical cultures, the weakness of the Protomedicato, the local economy for patent cures, the relative autonomy of Amerindian communities, and the power and large following of curanderas structured how medical professionals marketed their arts. Some were attracted to French encomia to the Noble Savage, but the pressures that drove this cultural moment were colonial conditions.

In a sense, this should be unsurprising. For more than 50 years historians have documented “medical mestizaje” in colonial Mexico. And for most of the colonial era, elites were under no illusion that the colony’s medical cultures were discrete. But then, in the last quarter of the 18th century, they invented this separation, imagining that somewhere just beyond the horizon there was pure Indian medicine. This cultural form declared its presence most vociferously with the affair of the lagartijas of 1782-1783, but then, for at least the rest of colonial rule, it continued to capture the attention of elites. As a new class of “enlightened” professionals sought to wrest control and stewardship of “society,” they also assumed responsibility for syncretisms and mixes of Spanish and Indian civilizations. Without a word for it, they believed that what they were working
toward was a type of mestizaje; only belatedly was a name for their efforts coined: 

*materia medica mexicana*. As the proper custodians of society (so they thought) they could be trusted to effect a measured, controlled, validated kind of mixture.

In the late 18th century, it wasn’t *mexicana* just yet. As we saw with the directives of the Royal Botanical Expedition, the glory and the proceeds of this indigenous knowledge were claimed by the Spanish crown. By recovering native knowledge, the naturalists (the king thought) would vindicate the memory of Francisco Hernández, who might sit beside Newton and Galen as a founding father of western science.496 As we witnessed as well, these “enlightened” minds evoked God’s wisdom in stocking the earth as much as they did the king’s benevolence. So who deserved the glory, the prestige and fame for rescuing humanity by means of the secrets of the Indians?

Certainly not any living Amerindians themselves, Creoles and peninsulares concurred. The professional class – doctors, naturalists, physicists, essayists, historians – positioned themselves within this discourse such that they alone had the capacity to “rescue from oblivion” knowledge that was on the brink of being lost forever. To find pure Indian knowledge, one could not look in the urban barrios and markets – those Indians, they thought, wallowed in the same muddy, mongrel stew as debased Spaniards and mestizos, castizos, and all those other low castas. Real Indians were far off in time or space. In either case, their wisdom was remote, and only a learned man could serve as the intermediary.

496 “Western science” was still not a nameable idea at this point in time. However, during this era of the rise of the British Empire, the idea of science as a discrete form of knowledge was solidifying and with it, the notion that it was uniquely a product of (northern) Europe.
Reality, though, was quite distinct from this fantasy. Medicine of many origins already circulated the colony: the urban pharmacies and markets served materia medica collected from Europe, Asia, Central and South America, and the Philippines, not to mention from New Spain’s hinterlands. The populace of New Spain was quite familiar with these intermixed medical cultures. These men – the inventors and promulgators of “Indian medicine” – therefore evinced something of a double-consciousness: at one and the same time they tapped the shoulders of the reviled curandera to inquire about this or that herb, and even as they denied the legitimacy, or even existence, of that popular healer. It was an absurd situation, searching for purity in a landscape of blends. And thus it was that Francisco Balmis learned a “secret remedy” from a Creole hawking good health on the street corner (literally) and traced this back to Patzcuaro so as to ascertain that it was truly an Indian recipe “since time immemorial.”

So were these men merely medical Don Quixotes? The simile is tempting, but misleading. Certainly some missed their mark. Ignacio de León y Pérez was undoubtedly a failed botanist. Martín de Sessé botched his efforts to get the árbol de manitas. But at other times, this absurdity, this double-vision was socially effective and efficient. As in the case of the lagartija of Amatitlán, or again the remedy of Patzcuaro, these men did successfully negotiate the terms of exchange with indigenous persons and communities, gaining the knowledge and specimens sought. Fools they were not. They submitted what they gathered to rigorous trials with dozens of patients of distinct
backgrounds; devised novel, systematic methodologies; and were fully integrated into a trans-Atlantic circuit of scientific knowledge.\textsuperscript{497}

They were men of science, so they insisted. And it was this identity that their double-conscious served. They stood awash in a brackish, blended sea and fished its depths. But then they claimed their catch was different than all the others, cleaner and purer, even if they snatched the fish from another angler. It was a tiresome, unending pageant to be a man of science in late colonial Mexico.

It is not likely that many ordinary people bought their ruse. Recall the botanist José Moziño’s ridicule for the residents of San Andrés de Tuxtla: “For them, the bottle with the inscription was a new species of mystery: they believed that it would serve as a Dike to contain the force of the flames; others suspected it was a Magic Letter through which I would announce to His Majesty the consternation [and obedience] of their pueblos.” We have no evidence but Moziño’s words as to these peoples’ perception of the eruption. But their actual, documented reaction to the eruption was a very reasonable “resolution to retreat to a more distant land.” To this Moziño retorted citing faith, not magic: “There is no escaping the ire of God,” nowhere to run. The “magic letter” convinced no one; it was Moziño’s fantasy, not the tuxqueños.\textsuperscript{498}

Nevertheless, the impact of the late 18\textsuperscript{th}-century Indian medicine moment was profound. Through 19\textsuperscript{th} century projects such as the creation of the Museum of Mexico, efforts at the turn of the 20\textsuperscript{th} century to rebuild of the ruins of Teotihuacán, indigenista

\textsuperscript{497} On the last point, see Aceves Pastrana, \textit{Química, botánica y farmacia en la Nueva España a finales del siglo XVIII}.

\textsuperscript{498} Moziño, \textit{Noticias de Nutka: diccionario de la lengua de los Nutkeses y descripción del Volcán de Tuxtla}, 116.
aspirations during the Revolution, and post-war celebrations of mestizo nationhood, the fetish of Indian medicine was carried into the present. Today, traces and reiterations of this enthusiasm are ubiquitous in Mexico and around the world. The mystique persists and Mexican nationalism continues to rest on the yearning for the simple truths of invented peoples.
Appendix: Indigenismo suderoso

Shortly after its installation in the Royal Indian Hospital, the temascal matured to become an iconic element of Mexican proto-nationalism and a persistent interest of 19th and 20th century physicians in search of an authentic Mexican therapeutic heritage. More recently, temascales have become tourist destinations, standard exhibits of “national patrimony” at museums and World Heritage Sites, and expected installations at many New Age cultural events around the world (such as the famous Burning Man Festival). While there is no doubt iterations of the sweat lodge were in use before and throughout the colonial period in both urban and rural contexts, the ideological advent of the temascal was born of the “Indian medicine” moment of the late 18th century.

José Alcina Franch finds the range of its employment spanning from Tierra Caliente (modern Guerrero and Michoacán), throughout the Mixteca (most of modern Oaxaca), south to the westward edge of the
The temascal got its modern debut in the Jesuit Francisco Clavigero’s very influential *Historia antigua de México*, first written and published in Italy in 1780 (but drawing from the author’s long residency in New Spain before the expulsion of the Jesuits in 1767). Clavigero, during his years living in Mexico, was observant of the daily practice, as he states in his writing. He was also aware of the bath’s popularity among colonial residents and its infamy among colonial administrators. Through regulation, licensing, and adaptation, the temascal was a living, changing practice. But Clavigero, with the slice of his pen, pinned the living practice to the page. He froze the temascal in his moment and reconceived it as a timeless, ahistorical and quintessentially Aztec cultural form, one that, in the secrecy of the humid cave, preserved timeless wisdom.

The point of Clavigero’s treatise, in a nutshell, was to redeem the pre-Hispanic Mexican past from the condescension of north European savants. This he sought to achieve by tracing Aztec civilization back not to the barbarian plains of Atlán, as was the common narrative since the conquest, but to a deeper past, that of the Toltec, to whom he credited the great pyramids of Teotihuacán. In this way the Aztec were dissociated from the untamed and uncivilized peoples of the northern frontier; thereby they were distantly removed from an existence that was solitary, poor, nasty brutish and short, as the followers of Hobbes would have it. But also, Clavigero denied the Catholic narrative tradition that placed the Indian in the throes of Satan prior to Cortés. With a naturalistic

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Yucatán Mayan territory – roughly, most Nahuatl language areas and the most of the reach of the Aztec empire. José Alcina Franch, *Temazcal: Higenie, terapéutica, obstreticia y ritual en el Nuevo Mundo* (Sevilla: Consejo Superior de Investigaciones Científicas, 2000), 104.

take on pre-Hispanic religion, Clavigero cast New Spain’s indigenous ancestors as significantly in error as to matters of faith, but not guided by the hand of Lucifer. The conclusion was that like the ancients of Greece, the Toltecs and their descendants could have civilization without God.  

A minor element of this new narrative was Clavigero’s redemption of the temascal from the forgetful sands of time. “The temascal,” he wrote, “despite deserving a distinguished place in the history of Mexico, has not captured the attention of the historians, excepting in offhand descriptions of minor importance; and if it were not practiced to this day among the Americans, its memory would be entirely lost.” Therefore, with a simple presentism, Clavigero applied his experiential knowledge from living in Mexico City to the ancient past – using the present to redeem the past to validate the present – and in doing so he shaped the future.

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Clavigero’s description of the temascal is unremarkable. It is a short, efficient description of the bath’s necessary elements written in a style to inspire replication, not philosophizing. It was his image of the sweat lodge, however, that did his ideological work. With this image, Clavigero sought to illustrate the historical parity of the ancients of Mexico with those of Rome. As David Brading explains, Clavigero eschewed

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502 According to José Alcina Franch, this was the first image of a temascal produced in almost 200 years, and possibly the first ever illustrating the inside of the edifice.
or avoided the then dominant teleologies of human history, either the gradual progression from barbarian to civilization, or a series of stages leading to human self-actualization, a la Giambattista Vico. Instead the Toltecs with which he begins his chronicle are already civilized, and whatever happened before is beyond the reach of the present. Thereby, the narrative history of the New World was much like that of the old: the glorious spread of God’s love and a gradual, progressive path of technological mastery. Medicine was a case in point: “Amongst other arts exercised by the Mexicans that of medicine has been entirely overlooked by the Spanish historians... [they] do not mark the progress which they made in an art so beneficial to human race. It is not to be doubted, that the same necessities which stimulated the Greeks to make a collection of experiments and observations on the nature of diseases, and the virtue of simples, would also have in time led the Mexicans to the knowledge of those two most important parts of medicine.”

Parallel and even paths led to similar destines.

It was towards this end that the illustration, after first erroneously labeling the bath with the plural form of temascal, explains for the educated reader that it is a “Mexican hypocaust.” The latter referred to the heating room of ancient Roman baths then being excavated in Italy. In fact, as Clavigero was publishing his work his fellow Mexican expatriate Jesuit, Pedro José Marquéz, was in Rome digging in the dirt. In his work seeking to vindicate the architectural genius of the first century BCE Roman architect Vitruvius, he explicitly compared the temascal to Roman baths, concluding that

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they were so similar that it was possible that they diffused from a common origin.⁵⁰⁴

Clavigero refuted any such suggestion that European or north African ancients travelled to or populated the Americas, but was instead fixated on parallel trajectories for Old and New World civilizations. Therefore, the temascal was essentially the same thing as the *ipocauso*, requiring only the modifier “Mexican” to demonstrate it was a variation of the same. And, then, Mexico itself was but a variation of Rome.

Printed first in Italy and subsequently across Europe, this temascal was a beauty of architectural simplicity, symmetry, and form. Without any distracting baubles, it is a purely functional edifice, exemplifying efficacy, efficiency and the beauty of a machine perfectly honed to its essential task. Eighteenth century applications for temascal permits indicate that most were integrated into or improvised from existing structures. The stand-alone shape here – floating about in empty space – emphasizes the temascal as a space apart. The street and its cultural and physical pollutants are strictly removed as are any decorations that could indicate cultural specificity. In its essence, the temascal is its function alone, possible and applicable within any civilization.

Clavigero penned his temascal in Bologna, far from the sick and the dying who frequented these baths in New Spain and far from the eight-month pregnant women and the new mothers who were the bath’s most dedicated and ritualized users in the 18th century. Instead of such distasteful bodies, a strapping young man lies as Donatello would have sculpted him. As in an advertisement, his anonymity invites the (male European) reader to transpose himself into the temascal. The evening sun sets, shading

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the alee side of the perfect hemisphere as a prosperous, healthful young man in his solitude strips to his undergarment and athletically crouches into his private refuge. The day’s quotidian heroics of employing his God-given body to earn his livelihood and noble independence are complete. Read in sequence, right to left, the fire magically, spontaneously ignites, heating the inner chamber where our hero relaxes. A neither feeble nor excessive plume of smoke rises like a genie. Reposed within, his broad shoulders, tight buns, and powerful legs savor their own beautiful existence. It is a manly womb, worthy of Athens, where heroes ready their bodies for whatever epic is in store.

The temascal, however, was never such a man-cave. In Clavigero’s own century, each was run by a temascalera or her husband and likely a number of growing children. In addition, as the convalescent rested, hands were needed to tend the fire, regulate the exhaust, handle the water, and fan the patient. Most often, it was these who were the bane of the authorities for their lax ways of allowing men and women to mingle, for overlooking whatever debauchery a warm, humid room might invite, and for excessive enthusiasm in dousing the bather with cold water upon exiting. In Clavigero’s temascal, however, the bath stokes its own fire. In the Marxist tradition, the commodity fetish is the significations and value attributed to a good that hide its true human cost in labor. Clavigero was not keen on boosting the temascal’s exchange value; instead, the exchange he effected was cultural and ideological. But this, like the market, required

505 Apparently the etcher’s error, corrected in subsequent editions.
506 Records suggest that this was a favored source of income for widows. “Autos seguidos por la Real Cédula que prohibía el uso de temascales públicos y comunes por ser inmorales,” 273r-275v.
507 This was thought to be especially dangerous for Spaniards whose bodies were ill-fit and ill-acquainted to such violent alterations.
making equivalences of distinct things, and this meant erasing the labor that situated the bath within a time, a place, a history, a culture.

As for the deeper past, Clavigero was correct that temascal was nearly entirely absent from the histories and chronicles then published. However, 16th century manuscripts, especially those of Bernardino de Sahagún (which Clavigero had consulted for other elements of his work) and Diego Durán painted a different picture. This evidence indicates that contrary to Clavigero’s solitary hero, the temascal was much a very social experience and institution across its wide range of use in south-central Mexico. According to Durán, temascales of the 16th century were built to hold up to ten people and by custom one never entered a temascal alone. Instead, as he puts it, widespread was the “diabolical superstition” that the sexes must be paired within the chamber. Even a sick man “dares not enter if a women does not accompany him.” Durán recounted that when he banned this “ugly and torpid custom” villagers brought young children of the opposite sex with them with the excuse that they were but accompanying their own kin. As for nobles, each had an appointed crew of both men and women who bathed their bodies — usually “dwarfs and hunchbacks,” wrote Durán. The temascal attendants were so “highly honored, esteemed, and revered that they were held as saints.” Additionally, the presence of especially large temascales in conjunction with ball courts in numerous temple sites in central Mexico suggests that these were employed in the 15th century for sizable public rituals. As far as the temascal was


present in pre- and early colonial codices, these were as place names or as signifiers for significant marriages and events in the lives of nobles, again underscoring the baths’ social function. Bernardino de Sahagún also recorded that the goddess known as “mother of gods” or “grandmother of the temascales” adorned every bath, and Durán noted that each temascal was founded through an elaborate public and communal ritual. While there is much that is unknown about the function of the pre-colonial temascal, within its range of use, west from Tenochtitlán through the Tierra Caliente, south through the Mixteca and modern day Oaxaca, and into western mayan areas, the bath was certainly a social not a private institution.

The point here is not that Clavigero was mistaken, but how he was mistaken. It must be noted first that from the time that his history made it to the eager audiences of creoles in New Spain (1784, according to Antonio Ramírez Alzate) Clavigero’s version of the temascal had a lasting effect. The modern manner in which he set aside the question of religion resonated perfectly with the interests and intentions of anthropologists of both the Liberal/Entrada era and the revolution. For differing but commonly patriotic ends, it was effective to regard pre-Hispanic symbolic life as a natural adaptation to the vagaries and risks of life and nature. In this way it was easily

510 Alcina Franch, Temazcalli: Higenie, terapéutica, obstetricia y ritual en el Nuevo Mundo, 104.
511 “In the first place, it is to be remarked that there was a god of the baths. When a bathhouse was to be built, after this deity had been consulted, offered sacrifices, and presented with many gifts, all the people of the ward where the bathhouse was to be erected took the small stone idol and buried it in the same site where the building was to be constructed. The latter was built there, the idol remaining underground. [This idol] was usually given sacrifices, offerings, and incense, especially before people entered to bathe.... I myself have torn down some bathhouses in order to cause fear, especially because these were bathhouses built in the ancient times. For my own satisfaction I wanted to find, seek out, the idol which they claimed was buried there below, to find it for myself. It turned out to be an ugly and monstrous stone face.”
concluded, as Clavigero did and the majority of historians, archeologists and anthropologists in his wake, that the symbolic was the mere veneer over pragmatic and effective medical knowledge. Indeed, to the present day, with the temascal integrated into New Age medicine and dieting trends, the conundrum of it and all “traditional” medicine remains the relationship of the elements Clavigero so effectively divorced: the social/cultural and the material/naturalistic effects. The same resonates in historical scholarship. While some late 20th century scholars effectively attempted to overcome this dualism (such as Alfredo López Austin and Gonzalo Aguirre Beltrán),\(^{512}\) many more remain trapped. Bernard Ortíz de Montellano and Carlos Viesca Treviño, whose description of the pre-Hispanic temascal comes directly and almost verbatim from Clavigero’s, both clumsily divide Nahua medicine between its therapeutic and spiritual/ritual elements.\(^{513}\) I do not endeavor here to prevail over this nature-culture dualism of modernity. But rather to illustrate how lasting Clavigero’s influence has been as the first to introduce this dualism to Mexican history.

That said, when Clavigero discovered the temascal – when he rescued it from oblivion and committed it to paper such that “its memory would not be entirely lost” – it was not at all the past that he was recovering; instead, it was the hopefully imminent future. The temascal he described was not primordial, it was instead the product of two hundred years of Spanish legislation, domination, and hegemony. He discovered the

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\(^{512}\) Aguirre Beltrán, *Medicina y magia*; López Austin, *Cuerpo humano e ideología: las concepciones de los antiguos nahuas*.

legally permitted temascal: the temascal that Durán and his fellow extirpators had
purged; the temascal that the king decreed in 1690; the temascal that met the standards of
the licensing office at the Audiencia; the temascal that gained the encomiums of the
Colegio Mayor y Viejo de Santa María de Todos los Santos; the temascal that was
brought within the walls of the Royal Indian Hospital where it could be regulated inside
and out. He sought to discover a new America, where nature was strong and fortifying,
where ancients basked in greatness – one that could be redeemed from two centuries of
misrule and declension.
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