

MAKING THE FIRST GLOBAL TRADE ROUTE: THE SOUTHEAST ASIAN
FOUNDATIONS OF THE ACAPULCO-MANILA GALLEON TRADE, 1519 - 1650

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ABSTRACT

This study examines the means by which the Acapulco-Manila galleon trade was established and maintained in the sixteenth and seventeenth centuries. Conducting annual voyages between the ports of Acapulco in New Spain and Manila in the Philippines required a tremendous amount of supporting infrastructure, namely labor and an ample supply of timber and other shipbuilding materials. Previous studies of the galleon trade have overwhelmingly focused on the commercial aspects of the trade while foregoing any consideration of the logistical challenges of sailing across the world's largest ocean in the early modern era.

It is the conclusion of this study that while the merchants and trade goods of East Asia were crucial to the trans-Pacific trade, the galleons themselves were built and maintained within the Philippines, using locally sourced building materials and laborers, as well as the skill of indigenous craftsmen and seafarers. It was not just Spaniards and Chinese traders coming together to trade at Manila, but also many thousands of *Indio* laborers working to support the trade as well. The vast array of necessary human and environmental resources that was readily available in the Philippines will be shown to have been a part of a thriving Southeast Asian maritime seafaring community, the foundations of which came to form the supporting structure of Spain's trans-Pacific endeavors. This dissertation revisits the creation of the Acapulco-Manila galleon trade with consideration given to the *Indios* of the Philippines, the resources of greater Southeast Asia, and the global context in which the trade developed

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INTRODUCTION

From 1571 to 1815 merchants and mariners in the Philippines and in New Spain maintained a regular, if tenuous, trans-Pacific connection by way of direct annual voyages between the ports of Manila and Acapulco, thus forging the last link in an emerging global network of commerce and exchange that extended across all the world's major oceans and waterways. With the establishment of Spain's first Asian trade entrepôt at Manila in 1571, colonial American markets became directly connected to the already rich and developed commercial networks of East and Southeast Asia. With the new Philippine base serving as a gateway, millions of pesos of New World silver were ferried across the Pacific each year to Manila and were ultimately absorbed by the expansive and dynamic Asian world-economy. In exchange for this substantial outflow of specie, the Manila Galleons returned to New Spain laden with spices, porcelains, and other Asian goods that were highly valued in American and European markets.

These commercial aspects of the galleon trade were instrumental in forging the early modern global economy and have been thoroughly studied in world history scholarship. However, commerce and trade have overshadowed the equally important movement of humans and materials between Southeast Asia and the Americas. The central role the native "*Indios*" of the Philippines played in the creation and maintenance of the galleon trade has also been overlooked. This study, by revealing the extent to which the galleon trade was built upon the toils of indigenous laborers and natural resources of the Philippine archipelago, attempts to ameliorate the standard commercially oriented narrative of the Acapulco-Manila galleon trade.

The foundation of the sixteenth-century trans-Pacific trade will be revealed to be largely Asian-based, not just in a commercial sense as many recent world historians have aptly proven, but in a logistical sense as well. Spain's indigenous subjects in the Philippines (*Indios*) served vital roles as shipbuilders and seafarers and had just as much a hand in creating Spain's Pacific empire as did the exchange of silver and silk.

For much of its nearly 250-year existence, the Acapulco-Manila galleon trade served as the only direct channel by which Spain's possessions in remote Southeast Asia received the missionaries, royal orders, settlers, and various colonial officials that "kept the Philippines Spanish," to use the words of Katherine Bjork.¹ The Manila galleons were the essential vehicles by which the Spanish empire maintained its hold over Manila. At the same time these galleons served a commercial function of genuine world historical significance. By connecting Spain's New World territories with the markets and goods of Asia, the Acapulco-Manila galleon trade developed into a major conduit of commerce in its own right. It has been this commercial aspect of the Manila galleons that has garnered so much scholarly attention of late, particularly regarding the galleons' role in the global exchange of silver for silks, porcelains, spices, and other luxury goods of East and Southeast Asia.² To pay for these highly sought-after items the

¹ Katherine Bjork, "The Link that Kept the Philippines Spanish: Mexican Merchant Interests and the Manila Trade, 1571 – 1815," *Journal of World History* 9 (1998): 25 – 50.

² Some examples of recent scholarship on this silver trade include, Dennis O. Flynn and Arturo Giráldez, "Born Again: Globalization's Sixteenth Century Origins (Asian/Global Versus European Dynamics)," *Pacific Economic Review* 13 (2008): 359-387; Flynn and Giráldez, "Born with a 'Silver Spoon': The Origin of World Trade in 1571," *Journal of World History* 6 (1995): 201-221; Flynn and Giráldez, "Cycles of Silver: Global Economic Unity through the Mid-Eighteenth Century," *Journal of World History* 13 (2002): 391-427; Flynn and Giráldez, "Arbitrage, China, and World Trade in the Early Modern Period," *Journal of Economic and Social History of the Orient* 38 (1995): 429 – 448; Andre Gunder Frank, *ReOrient: Global Economy in the Asian Age* (Berkeley: University of California Press, 1998); J. J. TePaske, "New World Silver, Castile, and the Philippines, 1590-1800," in *Precious Metals in the Late Medieval*

merchants of New Spain and the Philippines worked together to offload as much as 2,000,000 to 5,000,000 pesos of New World silver (50 – 150 tons) at Manila annually during the peak of the trade.³ So robust was the commercial exchange that took place in Manila Bay that by 1600—just twenty-nine years after Spaniards first arrived—over 20,000 Chinese had taken up residence in the city (from an original population of roughly 100) and anywhere between twenty and forty trading junks arrived each year to trade. This momentum was maintained for several decades. The Manila trade only entered into a noticeable decline in activity starting around 1620 – 1640, a period that coincides with a global contraction of commerce.⁴ It is worth noting that the commercial importance of Manila went well beyond Spanish interests—most of the silver imported from the Americas to the Philippines quickly filtered out of the archipelago and into the larger and more thriving trading zones of southern coastal China and greater maritime Southeast Asia.⁵ Manila’s function as a trade entrepôt had a regional significance beyond a simple exchange of specie for luxury goods. On the other side of the Pacific the return of the galleons to

and Early Modern Worlds, edited by J. F. Richards (Durham, NC: Carolina Academic Press, 1983), 425 – 445.

³ Some documents from the period indicate years of conspicuously large silver shipments. The *cabildo* of Mexico City reported an outflow of 5,000,000 pesos (127.8 tons) of silver to Manila in 1602. In 1597 the volume of silver sent across the Pacific spiked to 12,000,000 pesos. All available sources concur that silver exports from the New World to Asia were at their peak in the last years of the sixteenth century and the beginning of the seventeenth. Flynn and Giráldez, “Arbitrage, China, and World Trade”; Han-sheng Ch’üan, “The Inflow of American Silver into China from the Late Ming to the Mid Ch’ing Period,” *The Journal of the Institute of Chinese Studies of the Chinese University of Hong Kong* 2 (1969), 79; Eric R. Wolf, *Europe and the People Without History* (Berkeley: University of California Press, 1982), 154.

⁴ M. N. Pearson, “Spain and Spanish Trade in Southeast Asia,” in *European Entry into the Pacific*, edited by Dennis O. Flynn, Arturo Giráldez, and James Sobredo (New York: Ashgate, 2001), 122. For the theory of a general seventeenth century “crisis,” see Geoffrey Parker, *Global Crisis: War, Climate Change & Catastrophe in the Seventeenth Century* (New Haven, CT: Yale University Press, 2013); Geoffrey Parker and Leslie M. Smith, *The General Crisis of the Seventeenth Century*, Second edition (New York: Routledge, 1997).

⁵ See Anthony Reid, *Southeast Asia in the Age of Commerce, 1450 – 1680*, 2 volumes (New Haven, CT: Yale University Press, 1990 – 1995).

Mexico signaled the start of lively annual fairs in Acapulco and Mexico City. So many goods of East Asian origin found their way into New Spain via the Pacific trade that Spain's Pacific galleons earned the name "*Naos de China*" amongst the merchant community of Spanish America. Silks and porcelains in particular spread throughout Spain's empire in the New World, appearing in locations as remote as northern California and the Yucatan.⁶ Viewed in this light the Acapulco-Manila galleon trade had a central part to play not only in bringing the Philippines into the fold of Spain's empire but also in forging a key link in the burgeoning global economy.

Rather than focus on the issue of the galleon trade's role in early modern global commerce—a topic which has deservedly received extensive attention by historians over the last two decades—this study will investigate the overlooked question of how Spain's men of the sea⁷ managed to forge and maintain a trans-Pacific trade route in the first place. How such a long and grueling maritime route was sustained despite tremendous logistical and geographic challenges is a question of central importance, and, when answered, reveals a great deal about the nature of Spain's Pacific empire and the operation of Spain's colony in the Philippines. The question of how the Hapsburg kings of the sixteenth and seventeenth centuries came to oversee such a remarkable and globally significant trade is all the more necessary when we consider that all of the early Spanish-sponsored expeditions into the Pacific were wholesale disasters that gruesomely demonstrated the limits of Spain's maritime reach to be far short of what was required to operate in Asian waters. The rapid deterioration of vessels and the inevitable wasting away of crewmen during such long voyages showed that Seville, and even Acapulco, were too

⁶ Veronica A. Dado, "From Urban Manila to Frontier California: Asian Goods and California Presidios," *Mains'l Haul: A Journal of Pacific Maritime History* 41: 4 / 42:1 (2005): 48 – 53.

⁷ I have borrowed the term "Spain's men of the sea" from Pablo E. Perez-Mallaina's book of the same title. The term is used here in broad reference to the multi-ethnic crews that sailed in service of the monarchs of Spain—or, more accurately, the monarchs of Castile—in the sixteenth and seventeenth century.

far removed from Southeast Asia to serve as commercial bases for Asian trade. Primary source accounts of these voyagers reveal that mariners in service of Castile's aspirations faced challenges that were virtually insurmountable. Even reaching Asia was a nearly impossible task, let alone establishing a colonial base in the region and organizing a return voyage home. By 1560—nearly half a century after Magellan's landmark voyage across the Pacific—not one other vessel out of a total of six expeditions had managed to repeat the success of Sebastián del Cano's *Victoria* and return safely to Spanish territory from Asia.⁸ Unlike the Portuguese, who were able to endure the impact of shipboard sickness, starvation, and the attrition of their vessels by relying upon the range of resources available within the dynamic and bustling trading zone of the Indian Ocean basin, Spain's men of the sea faced a vast and desolate *Mar del Sur* that offered little in the way of material or human support.⁹ Where Portuguese mariners had only the Cape of Good Hope to contend with, Spain's men of the sea had to negotiate Atlantic and Pacific crossings to reach Asian waters. Such was Spain's inheritance from the Treaty of Tordesillas.¹⁰

This dissertation will highlight the fact that the Pacific posed challenges unique in world history, challenges that would take the better part of a century for Spain's men of the sea to overcome. Histories of the galleon trade and European Pacific endeavors in the sixteenth century, few though they may be, have never fully addressed the early and profound struggles faced by mariners when attempting to bridge such a vast seascape for the first time. A careful consideration of the measures taken by Spaniards in the New World and in the Philippines to

⁸ Juan Sebastián del Cano, the commander of the first vessel to circumnavigate the globe, is variously referred to as Sebastián de Elcano in some texts. See Appendix B for a listing of Spain's early Pacific voyages.

⁹ F. J. Tickner and V. C. Medvei, "Scurvy and the Death of European Crews in the Indian Ocean in the Seventeenth Century," *Medieval History* 2 (1958): 36 – 46.

¹⁰ For more on the consequences of the Treaty of Tordesillas, see Sanjay Subrahmanyam, "Holding the World in Balance: The Connected Histories of the Iberian Overseas Empires, 1500 – 1640," *American Historical Review* 112 (2007): 1359 – 1385.

overcome the immense distance of the Pacific and to lessen the attrition to both man and ship will reveal a great deal about the nature of Spain's colony in the Philippines and at the same time will help to reframe the history of European overseas voyaging in the early modern era more generally.

It is the central argument of this dissertation that Spain's trans-Pacific galleon trade was ultimately established and maintained only through the forging of a dependent, exploitative relationship with both the local environment and indigenous peoples of the Manila Bay region. The success of Spain's Pacific endeavors rested a great deal on the quest for the ideal location(s) to found shipyards along the Pacific Rim. Shipbuilding and repair was the single most vital factor in determining the long-term success of trans-Oceanic navigation and long-distance trade in the age of sail and the resources of the *Casa de Contratación*¹¹ and the support of European shipyards reached only so far; European mariners in the distant Pacific were faced with the challenge of forging new resource bases to support their endeavors. The availability and quality of natural resources such as timbers, surplus food crops, fibers, pitches, as well as the availability of (cheap) local labor, were all paramount factors in determining where to establish ports and colonial bases in Southeast Asia. While this may be interpreted as environmental determinism—and to an extent it is just that—a more accurate interpretation is one that shows Spain's men of the sea to have been actively engaged in a process of discovery and adaptation to new environments, resources, and populations. Here, the methods by which Pacific voyagers adjusted to and came to utilize the entire range of human and environmental assets in the Philippines is vital to understanding the success of the Acapulco-Manila galleon trade, the forging of a global trade network, and the transformation of the vast and punishing Pacific into a navigable "Spanish

¹¹ Based in Seville, the House of Trade was a government institution that regulated (or attempted to regulate) the maritime commerce of the Spanish Empire.

Lake.” It will be argued that the Manila Bay region was found to be the ideal colonial center of Spain’s enterprise in Southeast Asia because it afforded both human and material resources on a large scale but at a minimal cost. Indeed, it would only be *after* the founding of Manila in 1571 that Spain’s Pacific galleon trade was fully established, and with it a global network of trade.

Firstly, we must consider the native population of the archipelago, whom the Spaniards labeled *Indios*. The indigenous proved to be a tremendous asset for Spaniards in the Philippines. Those few mariners who did manage to reach the Philippines in the early decades of the galleon trade found themselves in desperate need of labor for a wide range of applications—the construction of colonial edifices, the harvesting of food crops, and, above all else, the building and repairing ships. To maintain a trans-Pacific link with the New World Spaniards in the Philippines oversaw a nearly ceaseless process of shipbuilding and repair, which required far more laborers than there were Spaniards available. Speaking more generally of Castile’s emerging global empire, it is a fact that the kingdom’s overseas territories were comprised of a relatively small population of “Spanish” officials (be they *peninsulares* or creoles) who lived amidst much larger indigenous and *mestizo* communities. The canon of professional historical scholarship on emigration to colonial New Spain and on colonial labor throughout the Hapsburg’s overseas territories in the early modern period is vast and need not be fully reviewed here.¹² Suffice it to say, the most onerous colonial labor duties were often shouldered by the indigenous communities, and when labor became scarce it was imported, often from great

¹² Some of the foundational works dealing with emigration to New Spain and the nature of Spain’s relationship with the New World in the sixteenth century include, Ida Altman, *Emigrants and Society: Extremadura and America in the Sixteenth Century* (Berkeley: University of California Press, 1989); Altman, *The War for Mexico’s West: Indians and Spaniards in New Galicia, 1524 – 1550* (Albuquerque: University of New Mexico Press, 2010); J. H. Elliott, *The Old World and the New, 1592 - 1650* (New York: Cambridge University Press, 1970); Matthew Restall, *Seven Myths of the Spanish Conquest* (New York: Oxford University Press, 2003).

distances if need be. It is no surprise then that Spain's colony in the remote Philippines only began to thrive after the colonial center was relocated from the sparsely populated Visayas—where the available pool of labor was small and difficult to control—to the more densely settled Manila Bay region in 1571—where *Indios* could be more easily controlled through various labor and tribute systems and made to work in newly established shipyards and for the felling timber in the interior of Luzon.¹³ *Indios* similarly found themselves conscripted into service as crewmen on the very ships they were forced to construct. The trans-Pacific voyage was long, uncomfortable, even fatal to some, and few were willing to volunteer themselves for such a voyage. Thus the overwhelming majority of crewmen aboard Spain's Manila galleons were in fact Asians. However, most *Indios* put to work at sea did so aboard local inter-island vessels that were used for the military defense of the colony against Chinese, Dutch, Japanese, and Portuguese advances. Here then, the subject population of the Manila Bay region was coerced into service both at land and sea for Spanish commercial and defense interests. Coercion was not absolute however. As we will see, many native elites of the Philippines seized the opportunity to increase their own power through service to the Spanish and often negotiated their own place within the hierarchy of colonial society.

It was not just an overt exploitation of Asian labor that made the Pacific trade a success. So much of the Acapulco-Manila galleon trade depended upon the expansive and dynamic Asian maritime economy. The Asian world-economy as many world historians have come to call the commercial sphere of East, South and Southeast Asia, offered newly arriving Europeans not only access to long-established lucrative trade networks, but also access to vitally important

¹³ The Visayas refers to the central Philippine island group between Luzon and Mindanao. The major islands of the Visayas include Cebu, Leyte, Negros, Panay, Samar, Masbate, and Bohol. See figure 1.

supporting infrastructure from which a long-term colonial presence could be erected. To be sure, Spain's eventual success in forging a trans-Pacific trade to Manila was not self-made, nor did the trade develop by chance. As we will see below, Spain's men of the sea toiled for decades to establish commercial relations with Asia in the early sixteenth century, and failed on multiple occasions. Ultimately, the Manila trade was created out of (and was an expression of) a vibrant Asian world-economy, which included mainland China, maritime Southeast Asia, and the Indian Ocean basin as key sub-regions. It was only by tapping into this thriving economic zone—which included the Philippines—that Spain was able to sustain a commercial link across the world's largest ocean.

In addition to cataloging the contributions of the indigenous population of the Philippines and the role of the larger Asian economy, this dissertation will address a second key point—that the exploitation of Asian labor went hand-in-hand with the exploitation of the local environment in the Philippines. Timber was abundant in the Philippines and was found to be ideal for ship construction. In many cases particular varieties of timber in the Philippines proved to be of superior quality to European and New World varieties. And with the application of native labor gangs, the collection of timber and the establishment of productive shipyards was far cheaper and practical than doing so along the Pacific coast of Mexico where so many early shipbuilding efforts fell flat due to high labor costs and sparse timber supplies. Alongside timber there was also *abacá*, later known as “Manila hemp,” a plant species indigenous to the Philippines ideal for the manufacture of rope. There was also a number of other fibrous materials available for the weaving of sailcloth. The manufacture of ropes and sails was a necessary but costly part of shipbuilding in the early modern era and Spanish mariners were lucky to find that the Philippines had the capacity to manufacture high-quality ropes and sails using local materials and labor, thus

precluding the need to import such components. The entire complex of local labor, timber, and *abacá* was part of a shipbuilding tradition that long pre-dated the Spanish colonial period in the Philippines. Once Manila was established as Spain's colonial center in Asia, this local shipbuilding complex was made to serve Spanish interests. Indigenous agriculture was also exploited on similar terms to feed not only Spain's ever-growing capital of Manila, but the many crewmen of the galleons as well. The Pampanga region, ideally located adjacent to Manila, was



Figure 1. The Philippines

made to serve as the bread basket (or rice basket) for the colony.

Spaniards in the Philippines harnessed both indigenous society and the environment, creating a labor-intensive system whereby trans-Pacific galleons were constructed, maintained, and supplied with crewmen and victuals. It is important to note that this was an entirely Asian-based operation. This exploitative relationship, centered on the Philippines, was created deliberately and backed up by numerous colonial labor and tribute systems, some of which were borrowed and adapted from similar systems in New Spain. The *polo y servicios* and the *vandala*, amongst other institutions, were introduced in the Philippines for the purposes of creating a relationship whereby the population and environment of the Philippines was made to work for Spanish imperial interest.¹⁴ The labor and tax institutions of Spain's empire have been exhaustively studied by social historians of both in the Philippines and New Spain. However, most works on indigenous labor within the Spanish empire have focused on its application to the creation of landed estates, the expansion of agriculture, the construction of urban and military edifices, and its role in the support of missionary enterprises.¹⁵ Historians have yet to come to grips with the vitally important connection between Spain's early colonial labor institutions in the Philippines on the one hand and the construction, maintenance, and operation of local and trans-oceanic vessels on the other hand. Given the extremely remote location of the Philippines

¹⁴ The classic works on the subject of colonial labor institutions in the Philippines include, Nicholas Cushner, *Landed Estates in the Colonial Philippines* (New Haven: Yale University Press, 1976); J. S. Cummins and Nicholas Cushner, "Labor in the Colonial Philippines: The Discurso Parenético of Gómez de Espinoza," *Philippine Studies* 22 (1974): 117 – 148; John Leddy Phelan, "Free versus Compulsory Labor: Mexico and the Philippines 1540 – 1648," *Comparative Studies in Society and History* 1 (1959): 189 – 201.

¹⁵ For the Philippines see, Cushner, *Spain in the Philippines: From Conquest to Revolution* (Quezon City, Philippines: Ateneo de Manila University, 1971); Cushner, *Landed Estates*; Phelan, *The Hispanization of the Philippines: Spanish Aims and Filipino Responses, 1565-1700* (Madison: University of Wisconsin Press, 1959); Dennis Roth, "The Casas de Reservas in the Philippines," *Journal of Southeast Asian Studies* 5 (1974): 115-124.

in regards to the rest of Spain's territorial holdings in the world, and considering the maritime nature of Asiatic and global commerce, it is not an exaggeration to say that shipbuilding was the single most vital operation to the health of Spain's colony in the Philippines. There is ample primary source evidence to suggest that Spaniards were well aware not only of the importance of indigenous labor in sustaining their colonial enterprise through shipbuilding but also of the negative impact such intensified exploitation had upon native society and the environment. A number of observers from the Philippines in the sixteenth and seventeenth centuries regarded shipbuilding as the single greatest consumer of colonial labor and noted that the onerous duties of felling timber and manning Pacific vessels served as the inspiration for many native revolts.¹⁶ Sustaining the trans-Pacific link between Manila and Acapulco, as well as maintaining Spain's hold over the Philippines themselves, could not have been possible without massive labor inputs from indigenous populations and tremendous quantities of local materials, namely timber and hemp fibers.¹⁷ The case will be made that a great deal of the social and environmental changes that accompanied the unfolding of the ongoing imperial project in the Philippines were the direct

¹⁶ Pedro de Sant Pablo, "Compulsory Labor Service by the Indians, 1620," in *The Philippine Islands, 1493 – 1898*, edited by Emma Helen Blair and James Alexander Robertson (Cleveland, OH: The Arthur H. Clark Company, 1903 – 1909) volume 19: 71 – 76. Pablo, a Franciscan friar and provincial governor, lamented over the horrid working conditions and the debts incurred by *Indios* attempting to avoid labor service.

¹⁷ Many documents suggest that the preferred varieties of timber in the Philippines were already in short supply by early years of the seventeenth century. For example, see Miguel Lopez de Legazpi, "Relation of the Philippine Islands," Cebu, 7 July, 1569, Blair and Robertson, 3: 54 – 61; Andres Mirandaola, "Letter to Felipe II," 8 January, 1574, Blair and Robertson, 3: 223 – 229; Pedro Velasco, "Later Augustinian and Dominican Missions," Tondo, 16 April, 1760, Blair and Robertson, 48: 91; Domingo Perez, "Relation of the Zambals," 1680, Blair and Robertson, 47: 292 – 293.

result of maintaining the Manila galleons. Such a conclusion forces a reassessment of early colonial history in the Philippines as well as the larger nature of Spain's empire in the Pacific.¹⁸

Tracing the specific environmental impacts of Spain's presence in the Philippines in the sixteenth and seventeenth centuries is exceedingly difficult, but not impossible. This dissertation argues that the most conspicuous manifestation of environmental change stemming from Spain's presence in the Philippine archipelago came about through the felling of timber. There were two methods by which the total forest cover of the archipelago was reduced. Firstly, there was the wanton and indiscriminant clearing of vast tracts of forests for the expansion of agriculture, which was itself an expression of a growing population. This largely took place in and around Manila Bay and Pampanga province and became an increasingly acute problem in the later centuries of Spanish rule.¹⁹ Secondly, and more germane to this study, was the felling of specific varieties of hardwoods for ship construction. *Molave*, *ipil*, *guijo*, *betis*, *lauan*, *tanguile*, and scores of other species of timber were found to be ideal for a range of applications in shipbuilding and were exhaustively targeted by Spaniards for felling.²⁰ Gangs of what were essentially corvée laborers were assembled in groups of thousands and made to march into the highland jungle interior of Luzon and other islands to fell and transport these highly sought after

¹⁸ Greg Bankoff is the only historian to date to tackle the issue of deforestation as a result of the galleon trade. There is plenty of circumstantial and qualitative evidence to suggest that the Manila-Acapulco galleon trade and shipbuilding in the Philippines had a profound environmental impact. However, Bankoff laments that a thorough quantitative analysis is all but impossible. Greg Bankoff, "Wood for War: The Legacy of Human Conflict on the Forests of the Philippines, 1565 – 1946," in *War and the Environment: Military Destruction in the Modern Age*, edited by Charles E. Closmann (College Station, TX: Texas A&M University, 2009), 32 -48.

¹⁹ John A. Larkin, *The Pampangans: Colonial Society in a Philippine Province* (Berkeley: University of California Press, 1972).

²⁰ Such names appear throughout Spanish records. The modern taxonomic labels for these species are *Vitex parviflora*, *Leucaena leucocephala*, *Shorea guiso*, *Ganua manticola*, *Shorea contorta*, and *Shorea polysperma*. For more on timber varieties, see Bankoff, "Wood For War," 32 – 48. The targeting of specific tree species is covered at greater length in Chapter 4 of this study.

varieties for the purposes of galleon construction. Wood cutting expeditions would often last several months and typically claimed the lives of scores of laborers. Woodcutting exacted both a human and environmental toll. As early as 1620 – 1640 a number of official missives from the Philippines complained of decreasing timber stocks and the need to trek ever further inland to locate new supplies of wood. In addition to general deforestation, the Spanish shipbuilding industry contributed to the long-term scarcity of select timber species that to this day are in danger of becoming extinct in the Philippines.²¹

This combined exploitation of labor and natural resources was only possible because of the existence of a developed Southeast Asian shipbuilding tradition. The shipbuilding labor and material assets at Manila—the skill and knowledge of local shipbuilders, the ecological awareness of which hardwoods were best suited to shipbuilding—all were in place prior to the colonial era and were all part of a larger suite of technological and material assets that existed throughout maritime Southeast Asia. Southeast Asia in the sixteenth and seventeenth centuries was a flourishing zone of trade and commerce with distinct and developed shipbuilding and seafaring traditions of its own. Upon their arrival in the Spice Islands and the Philippines in the early sixteenth century, Spain’s men of the sea were entering into a dynamic maritime commercial zone that existed as an intermediary hub between the powerhouses of East Asia and the Indian Ocean basin. Southeast Asia was a crossroads for trade goods, a hub for religious and cultural exchange, and—most importantly for the Spanish—the site of unique and developed shipbuilding traditions that were fine tuned to the environment and commercial landscape of the region.²² Southeast Asia hosted a number of ship designs and building techniques that thrived in

²¹ Bankoff, 33.

²² Pierre-Yves Manguin convincingly makes the case that Southeast Asia had developed a distinct shipbuilding tradition dating back to the early centuries of the Common Era. See,

the complex network of coastlines and waterways of the region. The survival of Spain's colony in the Philippines (as well as Portugal's empire throughout South and Southeast Asia) depended not just upon the adoption and exploitation of this local Asian shipbuilding complex, but more accurately on the coming together of two distinct shipbuilding regimes—one Southeast Asian and the other European.²³ Southeast Asian vessels performed well and endured in the humid tropical climate far better than European vessel types. Perhaps the best example in this regard is the *jong* (or *junco* in Portuguese sources), which Pierre-Yves Manguin claims was one of many types of large trading ships “built, owned, and operated” by Southeast Asian maritime powers from as early as the “first few centuries of the first millennium AD.”²⁴ Upon entering Southeast Asian waters Europeans were immediately struck by how well local ships like the *jong* performed. The sixteenth century Portuguese historian Gaspar Corrêia recounted his first encounter with a *jong*, which took place during Afonso de Albuquerque's voyage.

The [Portuguese] galleys started shooting at her, but this did not affect her in the least, and she went on sailing...our people did not dare board her and our firing did not hurt her at all, for she had *four super-imposed layers* and our biggest cannon would not penetrate more than two...Seeing this the Governor [Albuquerque] ordered his own *nau* to come alongside her. This was the Flor de la Mar, which had the highest castles of all. When she

Manguin, “Trading Ships of the South China Sea: Shipbuilding Techniques and Their Role in the History of the Development of Asian Trade Networks,” *Journal of the Economic and Social History of the Orient* 36 (1993): 253 – 280. Over time, according to Manguin, Southeast Asian shipbuilding became hybridized with Chinese influences and the size and durability of commercial and military craft increased tremendously. By the time of Iberian contact, larger Southeast Asian vessels averaged “350 to 500 tons deadweight” and “carried thousands of men.”

²³ Technology transfer across cultures and geographic regions is a complex issue. This study will reveal a number of instances where Europeans adopted Asian techniques and technologies piecemeal and wholesale. Examples of cross-cultural technological blending or hybridization are far more difficult to identify, particularly when it comes to something as complex and multifaceted as shipbuilding. See Arnold Pacy, *Technology in World Civilization* (Cambridge, MA: MIT Press, 1990), 65 – 68.

²⁴ Manguin, “The Southeast Asian Ship: An Historical Approach,” *Journal of Southeast Asian Studies* 11 (1980): 266.

managed to board the *junco*, her aft castle barely reached [the] bridge [of the *junco*]...the crew of the *junco* defended itself so well that they had to sail away from her again.²⁵

Such accounts of Asian vessels being larger, more durable, and better maneuverable than their European counterparts are frequent in Spanish and Portuguese accounts. European seafarers in the Philippines were particularly impressed with the durability as well as the variety of shipbuilding they observed. Antonio de Morga, a former colonial official of Manila and author of a general history of the Philippines, recounted the local vessels he observed in the Philippines in the late sixteenth century.

...*vireyes* and *barangayes* which are slender, light, low-lying boats held together with small wooden bolts and as narrow at the stern as at the prow. These carry a large number of oarsmen on either side who row the vessel with paddles...Above the oarsmen is a platform, or gangway, made of cane upon which the fighting-men stand... they have others, larger ones called *caracoas*, *lapis* and *tapaques* for carrying merchandise, which are very suitable indeed since they are roomy and draw little water...All the natives know how to row and manage these boats. Some are big enough to carry one hundred rowers each side and thirty soldiers besides.²⁶

Thoroughly impressed by the durability of local vessels and the productivity of local builders throughout maritime Asia, a technological exchange began whereby Portuguese and Spanish shipbuilders adopted local materials and laborers to execute the construction of their own vessels. In the Philippines this process of adapting ships to the local environment went a step further. When it came to local vessels for interisland commerce, communication, and naval defense, Spaniards relied almost exclusively upon local designs and native oared vessels. The Manila galleons however were much more a coming together of European and Asian traditions where the European galleon design was kept more or less intact while new and better (Asian)

²⁵ Quoted from Manguin, "The Southeast Asian Ship." Manguin added italics to denote his interpretation of technical descriptions. This passage is originally translated from Gaspar Correia, *Lendas da India*, vol. 1 (Lisbon, 1858), 216 – 218.

²⁶ Antonio de Morga, *Sucessos de las Islas Filipinas*, translated by J. S. Cummins (Cambridge: Cambridge University Press, 1971), 252 – 253.

building materials were utilized in construction.²⁷ Here then the Manila Galleons were not necessarily structurally altered with Asian designs, but, unquestionably, were vessels constructed in Asia of Asian materials.

Most all the vessels of Southeast Asia, the *jong* and *caracora* included, were built with no iron whatsoever. In the humid climate of Southeast Asia, exposed metal on vessels quickly rusted and rotted through the surrounding wood, a fact Europeans discovered soon after their arrival in the region. Additionally, European woods used in the construction of hulls, namely oak, were especially vulnerable to worm infestation.²⁸ Shipworms were not unknown to European seafarers but were particularly abundant in the warm waters of Southeast Asia and the Philippines, thus rendering European ships unseaworthy far quicker than was common elsewhere. As early as Magellan's voyage, local Southeast Asian timbers, pitch mixtures, and fibers were sought out by Spanish seafarers to repair the hulls of their ships and to replace worn cordage that had come undone during the Pacific crossing. Thus Spaniards came to adapt to the environment in Southeast Asia through a transfer of technology; from the *Indio* shipbuilders Spaniards gained new types of timber as well as a wide range of local vessel designs that were adopted wholesale. Moving the other way, Asians gained from Europeans new methods to construct decks, mast riggings, the sternpost rudder, as well as framework-style construction.²⁹

The sacrifices Spaniards required of their *Indio* tributes in shipbuilding were not all oriented towards the Manila galleon trade. Much of the shipbuilding activity of the Spanish Philippines was for the purposes of local naval defense. In the sixteenth and seventeenth

²⁷ Pacey, 65 – 68.

²⁸ Shipworms were a common problem for vessels in the age of sail. Shipworms are variously referred to as *torredos* and *broma* in Spanish accounts from the Philippines.

²⁹ Pacey, 67.

centuries Spaniards were engaged in a constant battle against Muslim (*Moro*) encroachment and raiding from the Southern Philippines and Sulu. There was also the threat posed by Chinese “pirates,” rival Portuguese forces, and later, a waxing Dutch merchant empire. Against all odds, these challengers were kept at bay through the exploitation of *Inido* communities as wartime labor and through the utilization of Southeast Asian vessels built locally in the Philippines. In times of war Spanish dependence upon local Southeast Asian ship designs, materials, and building techniques were at their greatest. In an effort to better navigate the environment of maritime Asia, Spaniards evolved their fleet, abandoning the clunky ship styles of Europe for local designs, which were quicker, more nimble, and much better suited to coastal navigation, inter-island commerce, and the raiding style of warfare in the region. Just as in the Atlantic and Mediterranean, different ships were suited to different purposes and environments. To come to grips with Southeast Asian seafaring, new designs and vessel types were required. For example, Spanish counter strikes against their Muslim foes in Mindanao and Sulu in the late sixteenth and early seventeenth centuries were made using the *caracora*, the very same vessel utilized by *Moro* raiders striking against Spanish (Christian) outposts. As one Spaniard in the Visayas observed when comparing Spanish and indigenous vessels, “the *karakoa* of our Filipino enemy...make a mockery of ours...”³⁰

To be clear, Spaniards were not the only European power to rely upon Asian labor, knowledge, and material resources to support their overseas endeavors in distant foreign waters in the sixteenth and seventeenth centuries. Where the Spanish relied upon local Asian seafarers as guides, pilots, navigators and mercenary fighters, so too did the Portuguese. Vasco da Gama

³⁰ Pacey, 67. G. R. Horridge, *The Lashed-lug Boat of the Eastern Archipelagoes* (London: National Maritime Museum, 1982); Horridge, *The Design of Planked Boats of the Moluccas* (London: National Maritime Museum, 1978);

pioneered the practice of relying upon local Asian guides when he hired the Arab pilot Ahmed-Ibn-Madjid in East Africa for his voyage into the Indian Ocean.³¹ Afonso de Albuquerque's strategy of targeting and conquering the key port cities of the Indian Ocean was both informed by and carried out by local Hindu merchants and mercenaries who were to some extent using the Portuguese to secure their own personal military and commercial aspirations.³² Timoja was one such notable Hindu mercenary. He offered assistance to the Portuguese by directing Albuquerque to Goa, aiding in its capture, and serving as a governor of sorts once it was secured.³³ Portuguese mariners operating in unfamiliar waters likewise utilized Javanese pilots in sailing from Malacca to the Spice Islands and Chinese pilots in the South China Sea.³⁴ One cannot deny the fact that Indian infantry and seamen constituted the bulk of Portugal's military forces in Asia. "When Albuquerque departed for the attack on Malacca," writes historian G. V. Scammell, "he left Goa defended by 500 Europeans and 2,500 Indian troops; 5,000 Indians were used against Aden, and over 600 shipped to Hormuz in 1515."³⁵ Like the Spanish in the Philippines, the Portuguese suffered from a lack of knowledge and a lack of manpower in the Indian Ocean, both of which were offset by relying upon local populations. Thus Spaniards and Portuguese shared in their reliance upon Asian manpower and skill. However, unlike the

³¹ A. J. R. Russell-Wood, *The Portuguese Empire, 1415 – 1808: A World on the Move* (Baltimore, MD: Johns Hopkins University Press, 1998), 18.

³² A. B. de Bragança Pereira, *Arquivo Português Oriental*, Nova Edição (Bastora-Goa, 1936 – 1940), volume 4, no. 54: 105, 126.

³³ Virginia Rau, *Carta de D. Manuel I ão Rei de Aragão, Fernando, sobre a Tomada de goa* (Lisbon, 1968), 42 – 43.

³⁴ Russell-Wood, 18. Russell-Wood also cites instances of Albuquerque using captured prisoners from the Turks to learn about the interior of Ethiopia, confiscating a Javanese map to better envision the Southeast Asian region, and utilizing wealthy Muslim merchants from Malacca to act as dignitaries for Portugal's arrival in the Spice Islands.

³⁵ G. V. Scammell, "Indigenous Assistance in the Establishment of Portuguese Power in Asia in the Sixteenth Century," in *Southeast Asia Colonial History*, vol. 1, edited by Paul H. Kratoska (New York: Routledge, 2001), 146 – 147.

Portuguese who enjoyed the vast human and material resources of the thriving Indian Ocean trading zone, Spaniards were faced with the relatively desolate seascape of the Pacific, much of which was devoid of any concentrated settlements or active trading zones. Thus Spain's men of the sea found themselves in a position of acute dependency in the Philippines to an extent that was unique in the history of early modern sea faring. Only in reaching the Philippines (which was part of the vibrant Southeast Asian commercial world) did Spaniards finally harness the resources needed to ensure their survival in Asia.

Defining the Key Terms

Many of the labels used throughout this study are problematic and, in most cases, hide rather complicated constructions of identity. It is only with great reluctance that this study employs identifiers such as "Spaniard," "*Indio*," "*Moro*," and "*Chino*."³⁶ On the one hand, such labels are to some extent necessary in order to generate a concise and intelligible narrative that does not get sidetracked into a post-colonial debate regarding the nature of identity and constructed colonial hierarchies. On the other hand, deploying such generalized terms to collectively refer to such diverse groups of people masks underlying social and cultural complexities that have profound historical importance.

"*Indio*" is used frequently throughout this study. It is the label that was given by the Spanish colonial bureaucracy—both secular and religious—to refer to their indigenous Christian

³⁶ These terms are utilized in the context of their historical meanings and should not be taken as derisive or derogatory.

subjects in the Philippines.³⁷ Recent research on early Christianity in the Philippines has revealed that many (most?) conversions were superficial and misguided and that the notion of a truly “Christian” *Indio* subject community in the sixteenth and seventeenth centuries should be regarded as an ongoing project, not a reality.³⁸ I continue to use the term *Indio* in this study knowing full well that it is a Spanish construction and harbors a great deal of bias towards a European perspective and does little to promote an indigenous view of colonial realities.³⁹ The meaning and significance of the term has received little scholarly attention in its Philippine context, especially compared to the voluminous research that has gone into examining *Indio* identity and experience in New Spain in the early modern period.⁴⁰ Rarely have historians of the early colonial Philippines sought to unpack the term *Indio* as it existed in the Spanish imagination and to examine the term’s connotations and its intended function. I argue that the process of creating a community of *Indio* subjects was part of an effort to facilitate and

³⁷ *Indio* is not interchangeable with “Filipino.” The term Filipino in the Spanish colonial era came to refer to a Philippine-born Spaniard (creole) in the early modern era. By the late nineteenth century the meaning of “Filipino” had changed once it had become tied to emerging nationalism and came to denote, in a more modern sense, a citizen of the Philippine nation.

³⁸ Vicente Rafael, *Contracting Colonialism: Translation and Christian Conversion in Tagalog Society under Early Spanish Rule*, (Ithaca, NY: Cornell University Press, 1988).

³⁹ William Henry Scott’s *Cracks in the Parchment Curtain* underscores the many problems and challenges of using sixteenth-century colonial Spanish sources to write a history of the subjugated indigenous peoples of the Philippines. William Henry Scott, *Cracks in the Parchment Curtain and Other Essays in Philippine History* (Quezon City: New Day, 1985). See also, Kathryn Burns: *Into the Archive: Writing and Power in Colonial Peru* (Durham, NC: Duke University Press, 2010).

⁴⁰ The classic work on the indigenous population of Mexico under early Spanish rule is certainly James Lockhart, *The Nahuas After the Conquest: A Social and Cultural History of the Indians of Central Mexico, Sixteenth Through Eighteenth Centuries* (Stanford, CA: Stanford University Press, 1992). See also, Yanna Yannakakis, *The Art of Being In-between: Native Intermediaries, Indian Identity, and Local Rule in Colonial Oaxaca* (Durham, NC: Duke University Press, 2008); Stuart B. Schwartz, *Victors and Vanquished: Spanish and Nahuatl Views of the Conquest of Mexico* (New York: Bedford/St. Martin’s, 2000); R. Douglas Cope, *The Limits of Racial Domination: Plebeian Society in Colonial Mexico City, 1660 – 1720* (Madison, WI: University of Wisconsin Press, 1994); Charles Gibson, *The Aztecs Under Spanish Rule: A History of the Indians of the Valley of Mexico, 1519 – 1810* (Stanford, CA: Stanford University Press, 1964).

legitimate the extension of colonial control, thus identifying those eligible for labor conscription, taxation, and religious instruction. To be sure, *Indio* was used somewhat indiscriminately by Spaniards in the New World and the Philippines throughout the colonial era when referring to an indigenous person. “*Indios*,” particularly as it was used in the Philippines, was a constructed identity that encompassed scores of distinct ethno-linguistic groups, mainly in Luzon and the Visayas where the presence of Spanish religious and government institutions were most felt.⁴¹ But let us be clear, Spaniards were not oblivious to ethnic or cultural distinctions amongst the indigenous peoples they encountered. Government officials and various other observers in the New World and the Philippines in the sixteenth century generated many lengthy written reports regarding the complex racial and cultural landscapes they encountered. Many travel accounts and official reports from Manila in the early colonial period demonstrate a keen awareness of the racial and cultural distinctions that existed amongst the indigenous peoples of the archipelago. To take one example, Antonio de Morga’s *Sucesos de las Islas Filipinas* of 1609 expounds on the traits and characteristics of the lowland coastal populations of Luzon versus those of the mountainous interior; of the variation in race, religion, and cultural practice that was evident between the animistic and tattooed inhabitants of the Visayas (variously termed the *pintados*⁴²) versus the peoples of Luzon or Mindanao, who appeared to enjoy more established social structures as well as a firmer rooting in the Islamic faith.⁴³ Many other writers besides made

⁴¹ For a survey of the ethno-cultural landscape of the pre-conquest Philippines, see Scott, *Barangay: Sixteenth-Century Philippine Culture and Society* (Manila: Ateneo de Manila University Press, 1994).

⁴² *Pintados*, was a reference to the ubiquitous practice of tattooing that Spaniards observed in Visayan communities especially.

⁴³ Morga, *Sucesos de las Islas Filipinas*. For a thorough analysis of the extent to which Spaniards observed ethnic and cultural differences throughout the Philippines, see Scott, *Cracks in the Parchment Curtain* and Scott, *Barangay*.

numerous similar observations regarding racial, social, and cultural differences amongst native peoples.⁴⁴

While the Spanish were clearly aware of the cultural, racial, and religious variations amongst the inhabitants of the Philippine archipelago, all was swept aside to make way for the creation of “*Indios*” as a category. The label as it was used in the Philippines in fact had no specific racial, ethnic, or linguistic foundation whatsoever, and was in every sense a “constructed community” for the purposes of better fitting the complex cultural patchwork of the indigenous inhabitants of the archipelago into the emerging colonial order. The creation of the *Indio* label served as a means to subjugate and identify native inhabitants that Spanish colonizers viewed as rightfully under their control. At the same time the utilization of the term was an attempt at incorporating Spain’s colonial subjects into the colonial state and greater Spanish Empire as active participants. *Indios* were to both contribute to and benefit from Spain’s imperial project, at least in theory. *Indios* were charged with contributing labor and tribute to the Crown and in exchange they were to receive protection and religious instruction. In this regard the label *Indio* was used to identify those obliged to render services and taxes to the colonial government but also signified a Christian subject.

The limits of *Indio* identity become clearer when we consider that those not brought into the fold of Catholicism remained outside the colonial order and were de facto not *Indio*.⁴⁵ To be

⁴⁴ For an example of a typical assessment of indigenous race, material culture, and religion, see the anonymous report, “Conquest of the island of Luzon,” 20 April, 1572, Blair and Robertson, 3: 121 – 152.

⁴⁵ Tamar Herzog’s study of *vencindad* and *naturaleza* identity and status within Spain and New Spain argues that (similar to *Indio*) the ultimate purpose of such broad classifications was to determine “who could enjoy rights and who could be forced to comply with duties.” In the colonial Philippines we more or less see the same logic at work, where the term *Indio* was used first and foremost to identify those obliged to render services and taxes to the colonial

sure, a great many groups participated in the Spanish colonial Philippines besides Spaniards and their colonial subjects. *Chinos* (Chinese) and their mestizo offspring made up a sizable population within the colonial Philippines and took up vital commercial roles within the Spanish colony. *Chinos* were the primary brokers of trade at Manila and were the intermediaries that facilitated Spanish access to the larger Asian maritime trade networks. Aside from Chinese communities in the Philippines there were Malays, Japanese, and many other Asian ethnic and religious groups, none of whom were fully subjugated as “*Indio*” but who nevertheless had important roles to play in shaping the development of the Spanish Philippines. Indeed, there will be many instances where we will see that the Philippines’ multi-cultural population was an asset to the Spanish. On the other end of the equation Muslim (*Moro*) populations of the Southern Philippines and Sulu remained fully outside Spain’s colonial grasp though both religious and militarist resistance. In a sense, the steadfast resistance of *Moro* populations in Southeast Asia helped define the borders of Spanish influence in the region. And while *Moros* did not contribute to the development of trans-Pacific commerce, they certainly impacted the trajectory of the colony’s development, sapping resources and manpower through a series of wars and raids in the early seventeenth century.

Much as in the New World, *Indio* identity in the colonial Philippines was not absolute—it was negotiated and nuanced. In many cases *Indios* were simply native subjects obliged to offer tribute and labor service to the crown. In other cases, *Indios* demonstrated some degree of social upward mobility, securing lands and tributes of their own within the colonial power structure, thus forming a *principalía* class. Other *Indios*, as we will see, fled the colonial system altogether, disappearing from tribute registers and shedding their colonial identity altogether. Whatever

government. Tamar Herzog, *Defining Nations: Immigrants and Citizens in Early Modern Spain and Spanish America* (New Haven: Yale University Press, 2003), 2.

examples we may point to, it is clear that Spain's indigenous subjects in the Philippines were part of a fluctuating and negotiated relationship with the colonial bureaucracy and that seemingly rigid labels like "*Indio*" were hardly static or absolute. *Datus*⁴⁶ who contributed to Spain's efforts during the Hispano-Dutch War in the seventeenth century or who acted to quell anti-Spanish rebellions were often awarded lands and laborers, significantly altering their rank and integration into the colonial order, often to the point where they might be viewed as citizens (*vecinos*) or agents of empire, occupying a space closer to that of a Spanish *hidalgo* or estate owner. A widow of a *datu* who died while fighting the Dutch on behalf of the Spanish in the seventeenth century was awarded six *casas de reservas*⁴⁷ by the government at Manila, thus elevating her status within the colonial order.⁴⁸ In another example, a native of the Philippines, Don Juan Macapagal was awarded with a landed estate in the 1660s after he moved to put down an anti-Spanish rebellion in Pampanga.⁴⁹ In the case of Macapagal, we have an *Indio* who was working to preserve Spanish interests and who was awarded handsomely for his efforts by becoming an *encomendero*. These examples serve to show that "Spaniard" and "*Indio*" are not absolute categories existing at polar extremes. The boundary lines between colonizer and colonized were more fluid than the common terminology lets on. These examples also show that there was ample room for negotiation between *Indios* and the colonial rulers. To simply regard Spaniards

⁴⁶ *Datus* were indigenous pre-Hispanic community leaders who headed up social units of modest size (*barangay*). The position of *datu* and the structure of the *barangay* remained more or less intact through the Spanish conquest, if somewhat altered. *Datus* became *Cabezas de Barangay* in the colonial order while some local communities were renamed and restructured into *barrios* and *visitas*.

⁴⁷ The *Casas de Reservas* system was a means to "reserve" individual laborers for the use of landowners. A *reservas* laborer was exempt from the arduous labors forced upon *indios* by the colonial government. See Roth, "The *Casas de Reservas* in the Philippines."

⁴⁸ Roth, 123 – 124.

⁴⁹ Larkin, *The Pampangans*, 26 – 27.

on the one hand and their *Indio* subjects on the other is an oversimplification of what was in reality a complex relationship.

“Spanish” or “Spaniard” is similarly problematic and masks just as much difference and complexity as “*Indio*” does when applied to the peoples of the Philippines. Furthermore, the fact that there was no such polity as “Spain” in the sixteenth century more deeply undermines use of such terms on a political level as well. Those people that fell within the borders of the kingdom of Charles the V or Philip II were not part of a nation in the modern sense of the term. Those living in “Spain” in the sixteenth century would have most readily identify themselves as Castilian, or Basque, or Andalusian, or Catalanian and did not have any understanding of a common “Spanish” identity.⁵⁰ Recent historical scholarship has shown that the structures of early modern states in Europe were in reality a negotiated patchwork of ethnicities, mini-kingdoms, and states within states, only loosely held together by the symbol of a monarch and the supporting structure of a bureaucracy. As such, a “composite monarchy”—like “Spain” in the early modern era—was inherently limited in its authority over its various parts.⁵¹ Not only do we see a cosmopolitan mix of peoples participating in “Spain’s” overseas ventures to the Americas and to the Philippines as a result of the nebulous character of states in Europe in the early modern era, but we also find it difficult to point to one single polity or state from which they

⁵⁰ The literature on the composite nature of early modern European states is vast. For a concise summary of fifteenth and sixteenth century Spain, see Jane Burbank and Fredrick Cooper, *Empires in World History: Power and the Politics of Difference* (Princeton, NJ: Princeton University Press, 2010), 120 – 124. For a specific case study of social structures and identity in a single region of Spain, see Ida Altman, *Emigrants and Society: Extremadura and America in the Sixteenth Century* (Berkeley: University of California Press, 1989). Altman makes a strong case for a prevailing localism within early modern Spain.

⁵¹ Ruth MacKay, *The Limits of Royal Authority: Resistance and Obedience in Seventeenth-Century Castile* (New York: Cambridge University Press, 1999); Daniel Nexon, *The Struggle for Power in Early Modern Europe: Religious Conflict, Dynastic Empires, and International Change* (Princeton, NJ: Princeton University Press, 2009).

originated. This is all to say that it is only with great care and a good degree of generality that I use the term “Spanish” to refer to any person serving the interests of the Kingdom of Castile and acting to extend the Crown’s imperial mission overseas.

We must be careful to realize that in the absence of a strong centralized state authority the “Spaniards” that made their way to the New World and to the Philippines in the sixteenth century demonstrated a great deal of self-interest and generated new identities for themselves. Matthew Restall’s *Seven Myths of the Spanish Conquest* aptly disproves the popularly held notion that the *conquistadores* of the New World (and the Philippines for that matter) were proper soldiers (*soldados*) fighting heroically for their king. The famous *conquistadores* of the sixteenth century were, in fact, hastily assembled footmen (*peones*)—rabble of men serving only their own interests and the interest of their commander. The men who initiated the conquest of both the Americas and the Philippines had a thoroughly mixed background of professions (none of which were “soldier”) and had a wide range of political and cultural identities (none of which were “Spanish”).⁵² How then did the *conquistadores* and settlers of early colonial New Spain and the Philippines view themselves? Recent historical research on the topic has shown that it did not take long for native (*creollo*) colonial identities to emerge that were independent from the metropole, or mother country. Ambitions and self-identities in the Americas unfolded within “the fluid social environment of a new world” and that even the act of departing the Old World for the New (or for the Philippines) instilled a measure of “political self-awareness” and at least a partial rejection of Old World identity.⁵³

⁵² Restall, 27 – 28.

⁵³ Nicholas Canny and Anthony Pagden eds., *Colonial Identity in the Atlantic World, 1500 – 1800* (Princeton, NJ: Princeton University Press, 1987), 51 – 53. See also, Cope, *The Limits of Racial Domination*; Altman, *Emigrants and Society*.

Chapters 2 and 3, which examine the early “Spanish” voyages to the Philippines, will reveal that while the expeditions of Ferdinand Magellan and Sebastian Cabot were ostensibly Spanish, very much about these voyages were not. Although the trans-Pacific voyagers that arrived in the Philippines and initiated the conquest of the archipelago in the sixteenth century had departed from Spanish port cities and sailed on vessels constructed in Spain, there was very little one could count as being purely “Spanish.” Maritime expeditions in the early modern era were multi-cultural affairs, often involving actors from many different kingdoms and regions. Even many of the expedition commanders that sailed to the Philippines were not Spanish-born. (Ferdinand Magellan was Portuguese and Sebastian Cabot was English, to take two examples.) When the headquarters of trans-Pacific voyaging was moved from Seville to Acapulco in the late 1520s, matters became further complicated; many that sailed to the Philippines under the Spanish flag were actually creole—*peninsulares* were always in the extreme minority. By the seventeenth century, after several decades of direct trade between Acapulco and Manila, many “Spanish” sailors and commanders might have more readily identified as being members of a Mexican community rather than a Spanish community.

Much like my treatment of *Indio*, I would like to make it clear that collectively identifying those that sailed from Spain or New Spain to the Philippines as having been “Spanish” is misleading. Let us also not forget that those that directly served Spain’s overseas empire as either shipbuilders, financiers, dockworkers, or expedition commanders often did not even come from Spain but claimed homes in various locations throughout Europe and the Mediterranean. From the very outset, enterprises that historians refer to as being “Spanish” were in reality carried out by a multitude of ethnicities and by subjects with competing political loyalties. Ferdinand Magellan, the first captain to reach the Philippines on behalf of the Spanish

Crown, commanded a crew made up of Spaniards, but also Portuguese, Basques, Italians, Englishmen, Greeks, and Asians. In this regard, Magellan's voyage was not the exception, but the norm in long distance seafaring. Historian Henry Kamen is one historian in particular that has studied multi-cultural contributions to the forging of empires and has generated a sweeping history that highlights the wide range of non-Spanish actors who participated in the creation Spain's overseas empire.⁵⁴ Looking to Spain's colonies we see further complications. There were countless graduations of identity among the ruling class in the New World and the Philippines just as there were in the Old World. In the colonies the most basic categories became *peninsulares*, creoles, and the countless permutations of mestizo. Such was the way of the world in the early modern era of overseas venturing. Philip J. Stern aptly categorizes the "typical" early modern world as "filled with a variety of corporate bodies politic and hyphenated, hybrid, overlapping, and composite forms of sovereignty."⁵⁵ While he is speaking of the English East India Company of the early seventeenth century specifically, his words ring true for the larger pool of European powers operating in Asian waters.

It should be clear that the coming together of "Spaniards" and "*Indios*" in the Philippines was a complicated affair and that we must be careful not to assume a rigid colonial hierarchy. Recent post-colonial scholarship on gender, race, linguistics, and culture has illuminated greater complexities in colonial organizations of power than was first apparent in the social histories of the colonial Philippines written a generation ago. Ann Stoler perhaps best articulates the core fallacies in assuming a straightforward division between rulers and ruled. She writes,

⁵⁴ Henry Kamen, *Spain's Road to Empire: The Making of a World Power, 1492 – 1763* (New York: Penguin, 2002).

⁵⁵ Philip J. Stern, *The Company State: Corporate Sovereignty & the Early Modern Foundations of the British Empire in India* (New York: Oxford University Press, 2011), 3.

Colonial authority was constructed on two powerful but false premises. The first was the notion that Europeans in the colonies made up an easily identifiable and discrete biological and social entity—a “natural” community of common class interests, racial attributes, political affinities, and superior culture. The second was the related notion that the boundaries separating colonizer from colonized were thus self-evident and easily drawn. Neither premise reflected colonial realities...⁵⁶

Stoler is commenting on a recent movement within historical scholarship when she goes on to say that, “the shift away from viewing colonial elites as homogenous communities of common interests marks an important trajectory in the anthropology of empire...”⁵⁷ Stoler’s point regarding the impropriety of ascribing absolute colonial categories to rulers and those they ruled is well taken. We must also recognize that it was not just within colonial structures and processes that historians are faced with problems of identity and the ambiguity of ethnicity, political rule, and subjugation. Southeast Asia was a dynamic zone of cross-cultural interaction and political development long before the arrival of Europeans. As such, populations were highly mobile and the identities and status of diaspora communities and multi-ethnic populations throughout the region are just as difficult to pin down, colonialism or no.

However, it should be noted that there are many instances in this study where the division between colonizer and colonized is starkly apparent. In the course of this study the most rigid and clearly defined division between Spaniard and *Indio* appears under the rubric of master and laborer. It was predominantly through forced labor systems like the *polo y servicios* and especially laboring in the shipyards that Spaniards were able to manifest and reinforce their power over their *Indio* subjects. It was in the shipyards and woodcutting gangs for the construction of the Manila-Acapulco galleons that the colonial order became most rigidly

⁵⁶ Ann Laura Stoler, *Carnal Knowledge and Imperial Power: Race and the Intimate in Colonial Rule* (Berkeley: University of California Press, 2010), 42 – 43.

⁵⁷ Stoler, 43.

manifest. R. Douglas Cope notes in his work *The Limits of Racial Domination*, that “the workplace sharply distinguished ‘man’ from ‘master’ and brought the two into prolonged, face-to-face contact.”⁵⁸ My examination of indigenous labor and tribute collection will unpack these problems and expose a number of instances when Spanish control and *Indio* identity were graduated and nuanced, but other times when colonial control was harsh and oppressive and when hierarchical identities were made clear.

We must also take care to remember that there were many integral actors in the early colonial Philippines who were neither “Spanish” nor “*Indio*.” The Philippines hosted a multi-ethnic population with communities from throughout East and Southeast Asia. Geographically, Spanish power did not extend to incorporate all of what is today recognized as the nation of the Philippines nor did the colonial government subjugate all the various ethnically, religiously, and culturally distinct communities that existed within its supposed sphere of control. Southern Mindanao, for example, was never subjugated in the early modern era and thus the indigenous Muslim populations there remained *Moros* in the Spanish colonial frame of mind.⁵⁹ *Moros* resisted becoming *Indio* through overt military aggressiveness and through a steadfast adherence to a faith that was antithetical to Spanish Catholicism. Again, as with the term *Indio*, *Moro* was not self-ascribed to the Muslims of Southeast Asia, but was in every sense a product of a European world view. I use *Moro* throughout this study merely for the sake of consistency and continuity with Spanish sources.

⁵⁸ Cope, 94.

⁵⁹ Cesar Adib Majul, *Muslims in the Philippines* (Quezon City: Asian Center of the University of the Philippines Press, 1973); Linda A. Newson, *Conquest and Pestilence in the Early Spanish Philippines* (Honolulu: University of Hawaii Press, 2009), 85 – 88. See also, Ethan Hawley, “Reviving the Reconquista in Southeast Asia: Moros and the Making of the Philippines, 1570 – 1662,” *Journal of World History* 25 (forthcoming).

In addition to Southeast Asian Muslim communities, we must also consider the tens of thousands of Chinese (*Chinos*) that took up residence in Manila by the early 1600s. Urban Chinese merchant communities were able to resist total subjugation on account of their vital economic function within the colony, namely their role as brokers between Spanish Manila and the greater East and Southeast Asian maritime commercial networks.⁶⁰ In this regard, Chinese communities in the Philippines were hugely influential in the commercial operation of the colony. As such, *Chinos*, or *Sanglays* as they came to be called, as well as their Chinese mestizo offspring, occupied a slightly more privileged station in colonial society than did *Indios*.⁶¹ Chapter 5 will show that the lines between *Chino* and *Indio* were not clearly defined. The various Asian ethnicities and cultures that were easily defined in the Philippines became blurred once *Chinos*, *Indios*, and other Southeast and East Asians began participating in the galleon trade and settling in New Spain. Because Spanish government records in Mexico neglected to differentiate between Philippine *Indios* or Chinese or Malays, Asians transported to New Spain came to simply be called “*Chinos*,” or “*mestizos de Sangley*,” or “*Indios chinos*.”⁶² In the Philippines many Chinese were exempt from labor services and were able to call upon a wide range of commercial contacts to support their many efforts at becoming shop owners, merchantmen and

⁶⁰ For a recent study on the peculiarities of Sino-Spanish relations in Manila, see Birgit M. Tremml, “The Global and the Local: Problematic Dynamics of the Triangular Trade in Early Modern Manila,” *Journal of World History* 23 (2012): 555 – 586.

⁶¹ Chinese and Chinese mestizos came to play an ever more influential role in the economy of the Spanish Philippines after 1700. E. Wickberg, “The Chinese Mestizo in Philippine History,” *Journal of Southeast Asian History* 5 (1964): 62 – 100.

⁶² Chapter 5 addresses the transformation of *Indio* identity in the New World. Large numbers of indigenous peoples in the Philippines were transported to the New Spain via the Manila galleons where they were accepted into the colonial order as *chinos*, regardless of their exact point of origin or ethnic background. For more on this, see Ed Slack Jr., “The Chinos in New Spain: A Corrective Lens for a Distorted Image,” *Journal of World History* 20 (2009): 35 - 67; Rudy P. Guevarra Jr., “Filipinos in Nueva España: Filipino-Mexican Relations, Mestizaje, and Identity in Colonial and Contemporary Mexico,” *Journal of Asian American Studies* 14 (2011): 389 – 416.

estate owners. Richard T. Chu, addressing this very problem as it pertains to Chinese communities within the Philippines, writes that the tendency for historians to cling to homogenous national and ethnic identities corrupts our ability to clearly see the complex nature of the colonial and pre-colonial Southeast Asian ethnic and political landscape.

Historical works on the Philippine Chinese share with other studies of “overseas Chinese” communities the same bias towards the use of earlier sociological and anthropological theories of ethnicity—theories that are based on the concepts of assimilation and integration and often tied-up to nation-based narratives... The, “Chinese” in different Southeast Asian countries are often viewed as one discrete, homogenous group pitted against a similarly homogenized community of “Thais,” “Indonesians,” Malaysians,” “Filipinos,” etc., while the creole offspring of these “Chinese”—the *lukjins* of Thailand, the *babas* of Malaysia, the *peranakans* of Indonesia, or the *mesitzos* of the Philippines—are considered either as having formed another distinct ethnic group, or having been assimilated into one of the local ethnic groups.⁶³

The involvement of Chinese populations in the early Spanish colonial Philippines is an important but complex subject. Suffice it to say, these Chinese and Muslim exceptions to Spanish colonial rule demonstrate that it was neither racial, religious, nor cultural differences *per se* that defined who was to be considered *Indio*; rather it was a rubric primarily determined by the colonial government’s ability to extend state power fully over some peoples, or partially or not at all over others.

Finally, considering the centrality of labor to this study, we must establish the problematic issue of slavery as it existed in the colonial Philippines. Slavery amongst Spanish and *Indio* communities generated problematic relationships with the other labor institutions established within the early colonial framework. Considering slavery as it existed alongside more legitimated forms of labor institutions also had repercussions for the process of forging Spanish,

⁶³ Richard T. Chu, “Catholic, Sangley, Mestizo, Spaniard, Filipino: Negotiating “Chinese” Identities at the Turn-of-the-Twentieth-Century Manila,” in *The Philippines as Home: Settlers and Sojourners in the Country*, edited by Maruja M. B. Asis (Manila: Philippine Migration Research Network, 2001), 42.

Indio, and *Moro* identity. The forced conscription of *Indio* subjects as laborers under the *polo y servicios* was not considered to have been slavery by the Spanish colonial government. *Indios* were considered to be subjects of the Spanish King and therefore were entitled to certain rights. *Indios* were to enjoy instruction in the Catholic faith and were to be defended by their Spanish rulers from foreign attack and *Moro* capture. In exchange, as subjects of His Majesty, *Indios* were required to offer tribute and to complete periodic labor service.⁶⁴ Being so far from the center of royal authority, there were plenty of opportunities for Spaniards in the Philippines to abuse this social contract and to claim natives of the Philippines as slaves or to demand service and tribute in excessive amounts. The frequency with which royal decrees were issued reiterating the ban on the ownership of *Indios* as outright slaves and the requirement to treat *Indios* humanely indicates that abuse was common in the sixteenth century. However, Spaniards in the Philippines were permitted to buy and trade in slaves so long as they were not *Indios*, that is, not subjects of the king. A royal decree of 1568 informed the Philippine government that, “...inasmuch as there is in that land [the Philippines] an island of *Moros*, and that they come to buy and sell, thus preventing the preaching of the Holy Gospel, and disturbing you, we should give you license to make such *Moros* slaves and deprive them of their goods.”⁶⁵ Aside from enslaving hostile *Moros*, Spaniards in the Philippines often participated in the Southeast Asian slave trade, which dealt in captives taken as far away as East Africa and India. As Antonio de Morga complained to Philip II in 1598, “the country [the Philippines] is becoming filled with black slaves and Cafres, brought by the Portuguese.”⁶⁶

⁶⁴ William Henry Scott, *Slavery in the Spanish Philippines* (Manila: De La Salle University Press, 1991), 4 – 35.

⁶⁵ Royal Order, 16 November 1568 (reissued 4 July 1570) in *Cedulario-indiano* 4: 374.

⁶⁶ Antonio de Morga, “Relation,” Manila, 8 June, 1598, Blair and Robertson 10: 87. “Cafres” refers to East African slaves, often originating from Madagascar and Mozambique.

It is interesting to note that King Philip II explicitly forbade the enslavement of *Indios* who converted to “the sect of Muhammad;” only those Muslims who were religiously and politically opposed to his rule could be captured as slaves. Thus religious heresy was not ground in itself for enslavement. Those who accepted his rule but not the Catholic faith were to remain his subjects but were to be persuaded to join “our Holy Catholic Faith by fair and licit means.”⁶⁷ Such orders were issued time and again by the King in response to a number of religious reports from the Philippines that complained of Spaniards violating the ban on slavery. Indeed, the above quoted edict was issued twice, once in 1568 and again in 1570.

Matters are further complicated when one considers that much of the Philippines possessed a culture of debt-slavery and slave-raiding that existed long before Spanish contact. Spanish colonial officials found native conceptions and practices of slavery reprehensible while at the same time taking on slaves of their own and engaging sporadically in the Southeast Asian slave trade, either through the Portuguese or through indigenous Southeast Asian traders who came to Manila to do business.⁶⁸ Spaniards owned slaves of their own, who were most often utilized for household or estate labor.⁶⁹ Much of Spaniards’ objections over native *Indio* practices of slavery were likely based upon a recognition that if *Indio* subjects were themselves permitted to continue holding other *Indios* as slaves the colonial order would become complicated and Spanish authority would be undermined at the local level. It was feared that *Datus* (or *cabezas de barangay* as they came to be called under the new Spanish colonial order),

⁶⁷ Royal Order, 16 November 1568, *Cedulario-indiano* 4: 374.

⁶⁸ For the introduction of non-Filipino slaves into the colony, see Scott, *Slavery in the Spanish Philippines*, 27 – 29.

⁶⁹ There is ample evidence of widespread slave ownership amongst Spanish landholders in the Philippines in both the sixteenth and seventeenth century. Dennis Roth cites the purchase of the Hacienda of Lolomboy as one of many such cases where a land transaction also included the slaves who were attached to the property. In the case of Lolomboy, seventeen slaves were given to the Dominicans who purchased the estate in the 1640s. See Roth, 117.

who often owned slaves themselves, would no doubt feel torn between protecting their own dependents and local interests before complying with the labor demands of their colonial masters. Indeed, conceptions of wealth amongst pre-Hispanic indigenous communities throughout the Philippines and greater Southeast Asia were based primarily on control over people (i.e. control over labor). The *datu*s extended their control over people largely through dependency relationships, much like debt peonage. There were degrees of dependency, from those well off enough to own their own land, to those who were for all intents and purposes owned outright as slaves.⁷⁰ In almost every case, subordination to a *datu* came about through indebtedness. It was recognized by the Governor General and *audencia* in the Philippines as early as the 1580s that an outright abolition of slavery as it existed amongst the indigenous would bring upheaval to most every local community, inspire the *datu*s and other slaveholders to rebel, and would generally disrupt the economy and social order of the Philippines. Wisely, the practice of native slavery was instead steadily eroded over the course of a century and the colonial government avoided explicitly or suddenly outlawing the practice.⁷¹

Historiographical Considerations and Contexts

As noted above, the overwhelming majority of scholarship on the Manila galleons has focused on the commercial importance of Spain's trans-Pacific trade, particularly during its peak in the decades immediately after the route's founding. The most visible works in this line of research are those of economic historians Dennis O. Flynn and Arturo Giráldez, both of whom have taken

⁷⁰ M. N. Pearson, "The Spanish 'Impact' on the Philippines, 1565 – 1770," *Journal of the Economic and Social History of the Orient* 12 (1969): 177.

⁷¹ Scott, *Slavery in the Spanish Philippines*, 24 – 26.

the lead in addressing the Manila galleons' role in the global exchange of silver. Flynn and Giráldez argue that the Acapulco-Manila galleon trade was a vital link of global commerce and that the founding of Spanish Manila in 1571 marked the creation of a truly globalized world for the first time.⁷² They reason that it was only after the development of trade between the Americas and Asia, via the entrepôt of Manila, that people and goods were able to circle the globe, moving in either direction across both the Atlantic and Pacific oceans.⁷³ Others have addressed the Manila galleons briefly in the course of larger studies of global commerce. Andre Gunder Frank's *ReOrient: Global Economy in the Asia Age*, places Spain's maritime traffic between Acapulco and Manila within the context of an early-modern, Asian-centered global economy.⁷⁴ From this viewpoint, Spain's Pacific galleons are shown to have been one link in a global network of silver trade that extended eastward and westward out of the Americas and girded the globe, terminating in Ming China. Similarly global-minded (though much briefer) contextualizations of the Manila galleons can also be found in works such as Eric R. Wolf's *Europe and the People Without History* and the brief survey of world history by Robert B. Marks, *The Origins of the Modern World*.⁷⁵

⁷² Flynn and Giráldez, "Globalization began in 1571," 232-247.

⁷³ Kevin H. O'Rourke and Jeffrey G. Williamson have challenged this interpretation of globalization, citing a much later date and wholly different set of criteria. See, O'Rourke and Williamson, "Once More: When did Globalization Begin?" *European Review of Economic History* 8 (2004): 109 – 117; O'Rourke and Williamson, *Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy* (Boston: MIT Press, 2001). The debate regarding globalization's origins and its defining features is widespread and ongoing. See, Jan de Vries, "The Limits of Globalization in the Early Modern World," *Economic History Review* 63 (2010): 710 – 733.

⁷⁴ Frank.

⁷⁵ Robert B. Marks, *The Origins of the Modern World: A Global and Ecological Narrative* (New York: Rowman & Littlefield, 2002). It should be noted that while the Sino-centric model of the early-modern global economy currently dominates world historical thinking in academia, there have been a number of recent challenges to this model. See Kent Deng, "Miracle or Mirage?"

These economic and commercial treatments of the Manila-Acapulco galleon trade have been well received by historians and have made significant progress in fleshing out the structure of the early-modern global economy. Spain's sixteenth and seventeenth-century Pacific trade relates directly to a number of currently popular historical topics, particularly early-modern globalization, maritime trade, trans-Oceanic exchanges, and European colonization, amongst other fields. However, beyond the realm of commercial exchange, very little has been written on the history of the galleon trade. To date, the only academic monograph to have attempted a comprehensive and general history of Spain's trans-Pacific navigation is William L. Schurz' *The Manila Galleon*, which, since its publication in 1939, is in desperate need of updating.⁷⁶ Schurz is the only historian to have dedicated his professional career to the broader history of Spain's Manila galleons, having published five articles on various aspects of the trade route.⁷⁷ However, Schurz never ventured beyond straightforward narrative retellings of the subject and largely eschewed proposing any unique argument as to the importance of the trade or its place within the larger history of European overseas expansion or global interactions. The next major work on the Manila galleons did not come until the 1960s when the French social historian Pierre Chaunu published a two-volume statistical compendium on Spain's trans-Pacific commercial traffic, *Les Philippines et le Pacifique des Ibériques*. Not surprisingly, Chaunu's work on the Pacific was completely overshadowed by his far larger (and far more celebrated) twelve-volume study of

Foreign Silver, China's Economy and Globalization from the Sixteenth Century to the Nineteenth Century," *Pacific Economic Review* 13 (2008): 320 – 358.

⁷⁶ William L. Schurz, *The Manila Galleon: The Romantic History of the Spanish Galleons trading between Manila and Acapulco* (New York: E. P. Dutton, 1939).

⁷⁷ William L. Schurz, "Mexico, Peru, and the Manila Galleon," *Hispanic American Historical Review* 1 (1918): 389-402; "The Philippine situado" *Hispanic American Historical Review* 1 (1918): 461-4; "The Voyage of the Manila Galleon from Acapulco to Manila," *Hispanic American Historical Review* 2 (1919): 632-38; "Acapulco and the Manila Galleon" *Southwestern Historical Quarterly* 22 (1918): 18 – 37; "The Spanish Lake," *The Hispanic American Historical Review* 5 (1922): 181 – 194.

Spain's Atlantic commerce through Seville.⁷⁸ Such has been the case generally in histories of Spain's overseas commerce: the Spanish Pacific has simply been overshadowed by the far more voluminous traffic of the Spanish Atlantic. This is not the only problem with Chaunu's research and that of others working in the 1960s. The overarching methodology of counting ships and goods going into and out of Seville and Acapulco misses the importance of East and Southeast Asian commerce and resources entirely. For Chaunu, the robustness and overall fortunes of Spain's Pacific trade was directly correlated to the health of the European economy, not the East Asian economy. I argue, along side many other world historians, that it was in fact the Asian economy that served as the dominant driving force of not just the Acapulco-Manila galleon trade, but global trade in the early modern era.⁷⁹ This dissertation operates within the logic that the global world-system was born in 1571 with the founding of Manila, and that for several centuries thereafter this new global world-system was dominated by the Asian world-economy, not the European world-economy.⁸⁰ That the Manila galleon trade was born and sustained out of

⁷⁸ Pierre Chaunu, *Les Philippines et le Pacifique des Ibériques*, 2 volumes (Paris: SEVPEN, 1960 – 1966); Chaunu, *Séville et l'Atlantique (1504 – 1650)*, 12 volumes (Paris: SEVPEN, 1955 – 1960).

⁷⁹ Chaunu argues for “une corrélation positive élémentaire” in regards to the developments in Europe (namely between Spain and the Dutch) on the one hand, and with the fluctuations in the Pacific trade on the other. Chaunu, *Les Philippines*, 1: 265. See also Pearson's analysis of Chaunu's findings, M. N. Pearson, “Spain and Spanish Trade in Southeast Asia,” 129. To be sure, there was a degree of correlation, but the foundation of the galleon trade was to be found in Asia, not Europe.

⁸⁰ This touches on a great world historical debate between the theoretical works of Immanuel Wallerstein and Andre Gunder Frank. Wallerstein has argued for the emergence of a European-centered world-system in the fifteenth century—one of many world-systems to have existed throughout history—that subsequently expanded outward to incorporate all the regions of the globe as peripheries and semi-peripheries. Andre Gunder Frank's *ReOrient* argues that there has only been one world system and that for much of history—the early modern period included—the one world system has been an Asian-centric system. This dissertation argues that the Acapulco-Manila galleon trade can only be understood within the logic of Gunder Frank's Asian-centric model. The futility of early Spanish voyages to Asia, as outlined in Chapter 2, is proof of the limitations of the European world-economy/world-system in the early modern

Asia, not Europe or the Americas, is but one example of the power and influence of the Asian-centered global economy of the early modern era. This dissertation will attempt to ameliorate such underlying Euro-centric tendencies when speaking of Pacific trade. By examining what factors made the galleon trade possible—namely Asian labor and Asian materials—the history of the galleon trade will become more properly framed within an Asian context. Furthermore, this study operates under the general assumption that the Pacific should not be viewed as a less dynamic extension of the Atlantic commercial world. The Pacific in the early modern era, although very much connected to Europe and the Atlantic, was its own entity with entirely different operating principles and centers of trade.

There have been a few scholars that have taken up Spain's endeavors in the Pacific as a specific field of study, however their work largely avoids any specific investigation into the creation and operation of Spain's Manila galleon route. Next to Schurz, Carmen Yuste López is perhaps the only other historian to have taken up the history of the galleon trade on an extensive basis, authoring two monographs on the galleon merchants over her career, *El Comercio de la Nueva España con Filipinas, 1590 – 1785*, published in 1984, and *Emporios Transpacíficos: Comerciantes mexicanos en Manila, 1710 – 1815*, published in 2007. As their titles suggest, these works are primarily concerned with Mexican merchant interests and the broader commercial aspects of the Manila galleon trade only after it had become an established and

period. At the same time, the Asian foundations of the trans-Pacific trade, which began in Manila in 1571, helps to support an Asian-centric understanding of the early modern world economy. See, Andre Gunder Frank and Barry K. Gills eds., *The World System: Five Hundred Years or Five Thousand?* (New York: Routledge, 1993); Gunder Frank, *ReOrient*; Immanuel Wallerstein, *The Modern World System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century* (Berkeley: University of California Press, 2011).

thriving maritime route.⁸¹ Adopting a Mexican-centric approach does much to underscore Mexican participation in Pacific commerce but tends to neglect the importance of Philippine and Southeast Asian resources in the forging and continued operation of the galleon trade. O. H. K. Spate's broad survey of Spain's experience in the Pacific, aptly titled *The Spanish Lake*, stands as one of the only works to attempt a comprehensive history of all of Spain's early Pacific exploits, although it is a curious work in that the galleon trade features in only a minor way while a great deal more attention is given to the operation of coastal traffic along the western shores of the New World.⁸² There is also Harry A. Morton's history of Pacific seafaring, which addresses the experiences of Spain alongside France, England, and United States.⁸³ None of these works address the Manila galleons directly, nor are they concerned with explaining how Spain's Pacific trade came into existence in a logistical sense. Even more importantly, none of these works attempt to include Asian perspectives or Asian contributions to Pacific seafaring in the early modern period. To date, works on Pacific exploration and commerce in the sixteenth and seventeenth centuries have been overwhelmingly Euro-centric in their treatment of what was in actuality a *Euro-Asian* enterprise. This study is an attempt to ameliorate this gross imbalance in the history of the early-modern Pacific.

This dissertation will also make every effort to address the Manila galleons directly, treating the trans-Pacific trade as the central point of study. However, the topic of the Manila-Acapulco galleons will also be approached from a world historical perspective. Spain's trans-

⁸¹ Carmen Yuste López, *El Comercio de la Nueva España con Filipinas, 1590-1785* (México, D.F.: Instituto Nacional de Antropología e Historia, 1984); *Emporios Transpacíficos: comerciantes Mexicanos en Manila, 1710 – 1815* (México: Universidad Nacional Autónoma de México, 2007).

⁸² O. H. K. Spate, *The Spanish Lake* (Minneapolis: University of Minnesota Press, 1979).

⁸³ Harry A. Morton, *As the Wind Commands: Sailors and Sailing Ships in the Pacific* (Middleton, CT: Wesleyan University Press, 1975).

Pacific trade was trans-regional by its very nature and the process of its creation and maintenance involved a number of actors, both human and material, from Europe, the Americas, the Philippines, greater Southeast Asia, and East Asia. This study will therefore tread across many fields of historical research in an effort to weave together a complete understanding of Spain's early galleon trade in the Pacific and how it was forged and maintained. On its surface, much of what this work argues will fall under the headings of maritime history and the larger field of Spain's overseas empire. This study will also bridge the gap to early-modern Southeast Asian historiography and the early colonial Philippines, particularly when discussing the role of the *Indios* and their subjugation and exploitation as a labor force. When discussing the many local materials of the Philippine archipelago that proved vital to the creation of Spain's Pacific fleet, this study will then be engaging in an environmental history of sorts. The environment will also play a prominent role when asking why the Pacific coast of New Spain failed to develop any thriving shipyards in the early and mid-sixteenth century, thus forcing Spaniards to seek out better suited locations in distant Asia. However, on the broadest of scales, this dissertation will engage with and contribute to histories of the early-modern world economy and European overseas exploration and colonization. Being all these things at once is necessary if one is to come to grips with a subject that under the surface is in fact a richly interconnected landscape of a number of fields of research.

The conclusions this study draws regarding the experiences of Spain's earliest Pacific explorers and the way in which the Manila galleon trade was initially established will force a reassessment of the academic scholarship on Spain's overseas empire. It will be made clear that the process by which Spain extended its empire across the world's largest ocean and into Southeast Asia was by

all accounts a piecemeal and disorganized affair, fraught with hardships, and ultimately taking the better part of a century to achieve. Even more important, the eventual development of Pacific commerce later in the sixteenth century had more to do with Asian resources than with Spanish heroics and perseverance. The voyage of Ferdinand Magellan, albeit a daring endeavor, accomplished little and signaled the beginning of an era of struggles. After considering the numerous obstacles that stood in the way of Spain's success in the distant *Mar del Sur*, it will be argued that Spain's men of the sea were only able to maintain their presence in Asia by developing methods to exploit the environments and peoples they encountered on the far side of the Pacific. The development of shipyards in Mexico and Luzon, which were the foundational components necessary for sustaining Pacific navigation, required a tremendous dependency upon the environments and peoples of both regions. However, it will be made clear that while Acapulco contributed to the maintenance of trans-Pacific commerce later in seventeenth and eighteenth centuries, the lion's share of the labor and effort put into the creation of the galleon trade in the sixteenth century came from the Asian side, not the Americas. Even the day-to-day operation of the galleons themselves depended largely upon Southeast Asians, not Spaniards. Spain's empire, at least in the Pacific, was, as Kamen has argued, an empire forged on compromise, trial and error, and a myriad of contributions from non-Spaniards of various ethnicities. To be sure, there are many parallels that can be drawn with Spain's exploitation and utilization of indigenous communities in the New World versus the Philippines. Reliance upon local peoples began almost as soon as Spaniards arrived in the New World, particularly when it came to forging military alliances in the buildup to the conquest of Tenochtitlan. Following the initial conquest, native labor was vital in constructing the colonial edifices of Mexico City, in staffing the many *haciendas* and *rancheros* throughout Spanish Mesoamerica, and in building up

the colonial economy of New Spain generally.⁸⁴ It is worth noting however, when it came to establishing shipyards along the Pacific coast of New Spain, the needed manpower and material resources were simply not available.

A second major area of historical research falling within the scope of this study is that of the early colonial Philippines, which has long been a growing and productive field of inquiry. It will be one of the many conclusions of this dissertation that the Manila galleons were sustained only via the exploitation of indigenous populations in the Philippines and that the dependent, exploitative systems introduced by the Spanish were imposed largely for the maintenance and construction of sailing vessels. Shipyard labor introduced a number of changes and stresses to indigenous society. When evaluating the place and importance of shipbuilding, one must not overlook the fact that the very existence of Spain's colony in the Philippines depended upon the continued operation of the trans-Pacific trade, which was the only link connecting the archipelago to the larger Spanish empire.⁸⁵ Maintaining the only trans-Pacific shipping lane in existence in the 1500s and 1600s as well as building and operating the numerous local water craft used for local commerce and military defense in the Philippine archipelago required vast inputs of labor and materials far beyond what was required for other activities and functions within the colony. It was the Philippine archipelago, which possessed vast quantities of cheap labor and abundant hardwoods for shipbuilding, which was made to shoulder the lion's share of the burden in maintaining the galleon trade. As we will see in Chapter 3, this only came to pass once shipbuilding efforts along the Pacific coast of New Spain failed to thrive in the early

⁸⁴ Eric Van Young, *Hacienda and Market in Eighteenth-Century Mexico: The Rural Economy of the Guadalajara Region, 1675 – 1820* (Berkeley: University of California Press, 1981); William B. Taylor, *Landlord and Peasant in Colonial Oaxaca* (Stanford: Stanford University Press, 1972); Lockhart, *The Nahuas After the Conquest*.

⁸⁵ Bjork, 25 – 27.

sixteenth century. Much of the social change in the Philippines that occurred following Spain's arrival was due to the introduction of labor and tribute systems, which were themselves introduced for the construction and preservation of the galleons. The relocation of indigenous settlements, forced conscription into labor gangs, the excessive collection of tribute, and many other burdens forced upon *Indio* communities for the benefit of Spain's Pacific galleons were responsible for immeasurable change within indigenous society.

It was through this organized exploitation of *Indio* labor and environmental resources that Spain's colony developed a highly Manila-centric structure from the start—a feature that persisted for the entire colonial period. *Indio* labor was orchestrated primarily through Manila, agricultural activity intensified in and around Manila Bay, and timber and many other shipbuilding materials converged at the main shipyard of Cavite. As for the Spaniards, rather than take to the countryside and engage in ranching, mining, or farming as in New Spain, the allure of easy profit in the galleon trade combined with the large human and material demands required to maintain such a lively commerce ensured that the overwhelming majority of Spaniards in the Philippines remained within the capital well into the eighteenth century.⁸⁶ Thus Manila, because of the galleon trade, became the colonial and commercial center for both the ruling government and the subjugated *Indios*, not to mention tens of thousands of Chinese merchants. It has been a widely assumed fact by both historians of today and commentators of the sixteenth and seventeenth century that the lure of the galleon trade concentrated the majority of the colonial population, activities, and resources within the walls of Manila, thus the development of the larger colonial economy was neglected. I argue that this is largely correct—

⁸⁶ The Manila-centric structure of Spain's colony in the Philippines has been proposed and supported by many historians including, Nicholas Cushner, M. N. Pearson, and John Phelan, amongst others.

the galleons and the trade they facilitated played a leading role in shaping the structure and operating principles of the colonial Philippines.

However, a general survey of the recent historical scholarship on colonialism reveals a general tendency on the part of historians to focus on instances of cultural transformation, negotiated religious conversion, and post-colonial interpretations of indigenous resistance as the subaltern, while largely ignoring the logistical processes by which such transformations took place and took shape.⁸⁷ Colonial labor has been a more or less *passé* topic of study since its heyday in the 1960s and 1970s. Most contemporary works on the colonial Philippines put emphasis on more subtle and cultural forms of historical change, eschewing the economic, logistical, and material concerns of empire and commerce. That the labor and materials that went into maintaining the galleon trade were themselves leading factors in the reshaping of Philippine society is overlooked in current and past scholarship on the Spanish Philippines. This study argues that the institutionalization of labor in the Philippines was foundational to the development of the Manila galleon trade and that such institutions were exploitative and had profound role to play in the social transformation of the archipelago. To find works of history that *do* examine the exploitative systems of labor and tribute imposed by the Spanish in the Philippines, the development of commerce and trade at Manila, and the impact of Spain's colonial government more generally, one must typically look to works of J. S. Cummins,

⁸⁷ See for example, the works of Vicente Rafael. Perhaps the last major work of noteworthy Philippine social history was Alfred W. McCoy and Ed. C. de Jesus, eds., *Philippine Social History: Global Trade and Local Transformations* (Quezon City, the Philippines: Ateneo de Manila University Press, 1982). One may also consider, Linda A. Newson's demographic study of the early Spanish Philippines as another holdout of social history. Newson, *Conquest and Pestilence in the Early Spanish Philippines* (Honolulu: University of Hawaii Press, 2009).

Nicholas Cushner, John Leddy Phelan, and John A. Larkin, amongst others.⁸⁸ These historians generated publications that addressed important social issues but nevertheless failed to adequately recognize the role of the Manila Acapulco galleons in the process of colonization and transformation of indigenous society. While there is much of value to be taken from these authors, particularly when it comes to understanding the development of colonial infrastructure and the operation of such institutions as the *polo y servicios* and *vandala* they nevertheless share a number of fundamental misconceptions about the early colonial Philippines.

Of central importance to this study is the connection between the Manila-Acapulco galleon trade and the numerous labor and tribute systems imposed by the Spanish colonial government—a connection which has been greatly understudied by the leading social historians of the Philippines. In the classic studies of the early colonial Philippines the galleon trade is never regarded as a significant force for change beyond the commercial arena, when, in fact, the operation and maintenance of the Manila galleons constituted a leading consumer of Philippine labor and resources. To take one example, Cummins and Cushner so drastically underestimate the importance of indigenous labor that they claim, outright, that, “[in] the Philippines, native labor was not required to stabilize the colony.” They back up this argument by noting that there “were no mines and relatively few haciendas and cattle ranches.” Such a view derives from mistakenly using New Spain as a benchmark for Spanish colonial operations elsewhere. Assuming that what occurred in New Spain should have occurred in the Philippines is a false logic. Soon after making these claims regarding the unimportance of labor, Cummins and Cushner admit that “labor was needed for the shipyards constructing the galleons which crossed

⁸⁸ Cummins and Cushner, “Labor in the Colonial Philippines”; Cushner, *Spain in the Philippines*; Cushner, *Landed Estates in the Philippines*; Phelan, *The Hispanization of the Philippines*; Larkin, *The Pampangans*.

the Pacific to Acapulco, for public works projects, for building and maintaining churches and for personal services rendered to crown and ecclesiastical officials.”⁸⁹ Regardless of such general statements, the vital importance of shipyard labor to the Spanish colonial regime is not fully realized in any of their histories. The Philippines were very much an extension (and colony of) New Spain. The labor, tax, and government institutions that were utilized in the conquest and stabilization of the Spanish New World were transferred across the Pacific to the Philippines with only minor alterations. However, the Philippines posed vastly different challenges to a colonial government than did New Spain. Therefore the colonial government and economy that developed in Manila operated much differently than did Mexico City or Cuzco. In not recognizing the differences inherent in Spain’s Asian colonies versus its American colonies Cummins and Cushner lose sight of the fact that labor *was* “essential to the existence” of the Philippines, just not in the same manner as it was used in the Americas. Philippine labor (mainly applied to shipbuilding) was the only means by which Spain maintained a connection to the remote archipelago, never minding the fact that native labor *was* “required to stabilize the colony” if one takes the time to recognize the importance of the galleon trade to the Philippine economy and the role of indigenous labor in maintaining said trade. To make these observations one must recognize that the colonial Philippines operated in a different way than the American colonies and that the Philippine colony operated primarily within an Asian context. This dissertation aims to redress these issues and to show that not only was indigenous labor vital to the operation of the Manila galleons and therefore the larger colony, but also that the labor required for the building, maintenance, and service of the galleon trade played a profound role in reshaping indigenous society.

⁸⁹ Cummins and Cushner, “Labor in the Colonial Philippines,” 117.

This study is just as much a reassessment of the galleon trade as it is a call to ameliorate a glaring lacuna in Philippine historiography. My aim here is not to refute the arguments of any specific historian, nor to chastise any particular author for overlooking the impact of the galleon trade, rather my aim is to offer a means by which earlier works can be re-oriented into a more appropriate framework for understanding the peculiar relationship that existed between the galleon trade and the larger colony. Religious conversion, native resistance, cross-cultural interactions, and the social restructuring of indigenous society were all profound drivers of change in the colonial Philippines. As such, they justly deserve the attention of historians. However, my dissertation proposes that the galleon trade and all the affiliated process and institutions required for its operation and maintenance should be considered as another such driver of change in the late sixteenth and early seventeenth century. And let us not forget that the Manila galleons themselves, being the only link that existed between the Philippines and the greater Spanish empire were the sole facilitator of religious conversion, were a leading inspiration for native resistance, were a conduit for cross-cultural interaction, and were the driving force behind the social restructuring of the archipelago. This study is not the first to revisit the early colonial Philippines in a more commercially and socially oriented context. Ethan Hawkey, Ryan Dominic Crewe, and Birget Trimmel are three such young scholars that have adopted the early colonial Philippines as a specific field of research and whose works push forward an agenda to revive the study of colonial Manila and the galleon trade within a more global context.⁹⁰

⁹⁰ Ethan Hawkey, “Reviving the Reconquista in Southeast Asia: Moros and the Making of the Philippines, 1570 – 1662,” *Journal of World History* 25 (forthcoming); Birgit Magdalena Trimmel, “When Political Economies Meet: Spain, China, and Japan in Manila, ca. 1571 – 1644” (PhD dissertation, University of Vienna, 2012); Ryan Dominic Crewe, “Building a visible

Beyond the Philippines, this study will also engage with the historiography of greater Southeast Asia. As we will see, many of Spain's earliest efforts at creating a trans-Pacific trade took place outside Manila, in places like the Spice Islands and the Visayas. And once the galleon trade had been established at Manila the impacts of its success were felt not just in the Philippines, but throughout maritime East and Southeast Asia. Spanish Manila rose to the level of global trade entrepôt within a Southeast Asian economy, using Southeast Asian resources and networks. Manila attracted thousands of merchants from Southern China, Japan, the Malay Peninsula, and greater Southeast Asia. Most all of the New World silver brought to Manila aboard Spain's Pacific galleons quickly filtered out into the economies of East and Southeast Asia. Anthony Reid has convincingly argued that silver *reals* had become a vital medium of exchange in Southeast Asia's economy by the 1630s, and that silver—much of it Spanish—helped facilitate the continued development of Southeast Asia's "Age of Commerce."⁹¹ More importantly, Reid's work makes the case that Southeast Asia was not a peripheral socio-economic zone, but rather a thriving maritime hub of global significance as early as the mid-1400s. Indeed, the commercial dynamism of Southeast Asia and the many exotic and high-value goods that were exchanged throughout the region played no small part in drawing in European merchants and explorers.⁹² There is also the impact of the Manila trade on China to consider. As

Church: *The Mexican missionary enterprise in the early Spanish Atlantic, 1521 – 1600*" (PhD dissertation, Yale University, 2009).

⁹¹ Reid, *Southeast Asia in the Age of Commerce*.

⁹² Other works that highlight the importance of Southeast Asia as an economic zone of maritime commerce include, Victor Lieberman, *Strange Parallels: Southeast Asia in Global Context, c. 800 – 1830*, 2 volumes (New York: Cambridge University Press, 2003 – 2009); "Revisionist Study of Cross-Cultural Commercial Competition on the Vietnam Coastline in the Fourteenth and Fifteenth Centuries and Its Wider Implications," *Journal of World History* 24 (2013): 71 – 105; Craig A. Lockard, "'The Sea Common to All': Maritime Frontiers, Port Cities, and Chinese Traders in the Southeast Asian Age of Commerce, ca. 1400 – 1750," *Journal of World History*

Flynn and Giráldez have outlined on numerous occasions, the outflow of Spain's New World silver across the Pacific was a function of China's insatiable demand for the precious metal as a currency. The full impact the Manila galleon trade had upon the economy of mainland Asia would be difficult to truly assess here. If we take into consideration the protests of Admiral Hieronimo de Bañuelos y Carrillo, for example, we must consider Spain's trade in Manila to have been of profound importance to China. Expressing his concerns over the silver drain via the galleon trade, Carrillo wrote with no small measure of exaggeration that, "The King of China could build a palace with the silver bars from Peru which have been carried to his country."⁹³ While the Manila-China connection is not the direct subject of this study, drawing connections to greater Southeast Asia and China help to show how Spain's presence in the Philippines fit into a larger network of commercial interaction.⁹⁴

This dissertation will also find roots in the field of maritime history, particularly that of the early-modern European age of exploration and trade. Here too we find the Manila galleons under-represented in the relevant literature. A disparity has developed wherein most all works of maritime history on Spain's overseas exploits in the sixteenth and seventeenth centuries reach only as far as the Atlantic and Mediterranean. While one would expect to find the Manila galleons commanding at least a portion of such works as Pablo E. Pérez-Mallaina's *Spain's Men of the Sea*, or David Goodman's *Spanish Naval Power*, one finds only brief and sporadic references to the Pacific amongst what is more often than not an exhaustive examination of

21 (2010): 219 – 247; Andrew J. Abalagin, "'Sino-Pacific': Conceptualizing Greater Southeast Asia as a Sub-Arena of World History," *Journal of World History* 22 (2011): 659 – 691.

⁹³ Quoted in Spate, 201. This quote was taken from Blair and Robertson, 29: 71.

⁹⁴ The impact that Spain's silver trade had upon East Asia has recently become a point of debate however. See Deng.

trans-Atlantic shipping and Mediterranean naval engagements.⁹⁵ The Pacific has likewise gone wanting in the works of Carla Rahn Phillips, Jan Glete, Richard Unger, and so many other historians of Spain's maritime exploits.⁹⁶ Once again, such a neglect of the Pacific is likely a reflection of the fact that in the sixteenth and seventeenth centuries the Pacific was very much a backwater to the much more bustling Atlantic trade, both in terms of the number of ships and the volume of cargo at stake. While a smaller volume of shipping in the Pacific may on some level warrant a diminished level of attention from historians, nothing can excuse the level of neglect in current historical scholarship when one considers the role the galleons played in forging global commercial connections and in bringing dynamic social and economic change to the Philippines and greater Southeast Asia.

Finally, to answer how Spaniards managed to create and sustain a trans-Pacific link between the Philippines and the New World it is necessary to consider the environments of both the Pacific coast of New Spain and the Philippines. It will be shown that the process by which Spain's men of the sea at long last came to cross the Pacific and establish a permanent presence in Southeast Asia was in part a negotiation with local environments and local peoples. It was only by adjusting to the demands of new geographic challenges, by adapting shipbuilding processes to different collections of natural resources in the New World and again in Southeast

⁹⁵ Pablo E. Pérez-Mallaina, *Spain's Men of the Sea: Daily Life on the Indies Fleets in the Sixteenth Century*, translated by Carla Rahn Phillips (Baltimore, MD: The Johns Hopkins University Press, 1998); David Goodman, *Spanish Naval Power, 1589 – 1665: Reconstruction and Defeat* (New York: Cambridge University Press, 1997).

⁹⁶ Carla Rahn Phillips, *Six Galleons for the King of Spain: Imperial Defense in the Early Seventeenth Century* (Baltimore: Johns Hopkins University Press, 1986); Jan Glete, *Navies and Nations: Warships, Navies, and Statebuilding in Europe and America, 1500 – 1860* (Stockholm: Almqvist & Wiksell International, 1993); Glete, *Warfare at Sea, 1500 – 1650: Maritime Conflicts and the Transformation of Europe* (New York: Routledge, 2000); Richard W. Unger, *Cogs, Caravels and Galleons: The Sailing Ship, 1000 – 1650* (London: Conway Maritime Press, 1994); Unger, *The Ship in the Medieval Economy, 600 – 1600* (London: McGill-Queen's University Press, 1980).

Asia, and by forging a new labor system through which to exploit these new environments that Spaniards were able to establish and maintain a trans-Pacific maritime link between their many distant territories. Spain's history in early Pacific seafaring can be viewed along a spectrum of successes and failures. The first voyages to attempt a Pacific crossing were by and large failures resulting from an inability to adapt to the new environments encountered in the Pacific basin. Once Spain's men of the sea began to relocate shipbuilding efforts from Europe to the Pacific basin and began adapting old methods and practices to better suit the human and material resources available in distant and foreign coastlines, success rates in the *Mar del Sur* increased markedly. The Acapulco-Manila galleon trade emerged not out of Spanish ambition and ingenuity, but through a ruthless exploitation of indigenous labor and a compromise with local environments in Luzon and to a lesser extent in New Spain. While environmental history can be many things and can take many forms, this study will largely focus on the exploitation of material resources (namely timber and other shipbuilding supplies) in both the New World and the Philippines. However, the overall treatment of the environment offered here will attempt to be a great deal more nuanced than a straightforward history of resource dependency/exploitation.

Environmental history pertaining to European expansion overseas in the early-modern era, while a rich and rapidly growing field, has developed an overwhelming focus upon just a few themes—the transformation of colonial landscapes/biomes, the discovery and exchange of easily portable commodities, and the European attempt to understand and classify newly discovered plant and animal species. The first of these approaches owes everything to the works of Alfred W. Crosby while commodity history can be traced back to a number of seminal

works.⁹⁷ The field of early modern colonial botany and commodities is a great deal more recent and has a number of scholars currently opening insightful avenues of research.⁹⁸ Although there is much still to be learned within these schools, the field of environmental history, particularly the literature on European overseas exploration and colonization in the sixteenth and seventeenth centuries, has become saturated with their influence. This dissertation will break away from these approaches and consider the role of the environment in Spain's Pacific endeavors in a more integrated and ultimately more useful manner. This study will attempt to examine the environment as "a shifting network of human and nonhuman communities, of biotic and nonbiotic elements," and not simply as a collection of commodities for exploitation and a series of landscapes to be reshaped (although there was plenty of exploitation of natural resources going on in the Spanish Philippines.)⁹⁹ This is another way of saying that this study will emphasize Philippine labor (namely the *Indios*) and the environmental resources of the archipelago (namely timber) as two elements of a single package. It will be shown that Spaniards in the Philippines adapted to both *Indio* communities and the surrounding environment at the same time, regarding the two as a collective package to be utilized in concert. While such

⁹⁷ Alfred W. Crosby, *The Columbian Exchange: Biologic and Cultural Consequences of 1492* (Westport, CT: Greenwood Press, 1972); Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900 – 1900* (New York: Cambridge University Press, 1986).

⁹⁸ Londa Schiebinger and Claudia Swan eds., *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Philadelphia: University of Pennsylvania Press, 2005); Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge, MA: Harvard University Press, 2007); Daniela Bleichmar, *Visible Empire: Botanical Expeditions and Visual Culture in the Hispanic Enlightenment* (Chicago: University of Chicago Press, 2012); Daniela Bleichmar and Peter C. Mancall eds., *Collecting Across Cultures: Material Exchanges in the Early Modern Atlantic World* (Philadelphia: University of Pennsylvania Press, 2013); Daniela Bleichmar, Paula De Vos, Kristin Huffine eds., *Science in the Spanish and Portuguese Empires, 1500 – 1800* (Stanford, CA: Stanford University Press, 2008).

⁹⁹ Lise Sedrez, "Latin American Environmental History: A Shifting Old/New Field," in *The Environment and World History*, ed. Edmond Burk III and Kenneth Pomeranz (Berkeley: University of California Press, 2009), 255.

an approach may seem to treat “environment” as somewhat of a nebulous concept, the explanatory power of this approach is much more potent than simply cataloging the natural items Spaniards used to build their ships. By considering both the human and nonhuman elements of the environment together, one is better able to understand the process by which Europeans operating overseas utilized the local population both as a labor force and as brokers of ecological knowledge. There can be no question that the adoption of new shipbuilding materials and techniques in the Spanish Philippines came through indigenous intermediaries—the construction of “Spanish” galleons in the shipyards of the Philippines owed a great deal to both indigenous knowledge of shipbuilding and the necessary materials to be taken from the environment. From such an approach we are also able to better understand the importance of Spaniards’ utilization of local water craft for coastal defense and local trade. Indeed, local vessels, being better suited to the environment and waters of Southeast Asia, constituted the bulk of Spain’s colonial defense force in the Philippines for much of the sixteenth and seventeenth centuries. This was the case because local vessels were skillfully constructed by indigenous communities with expert knowledge of both the sea and the building materials available. The end result were vessels like the *caracora*, which perfectly suited the environment of the Philippines.

The aim of this study is to understand how Spain was able to forge a trans-Pacific link despite major logistical and geographical obstacles. As such, we must focus on how Spain’s shipbuilders and mariners interacted with the new environments they encountered along the Pacific coast of New Spain and in the tropical archipelago of the Philippines. To find success, and to simply survive so far from home, Spaniards working in the Pacific had to forge new relationships with environments vastly different from those in Europe. This is all to say that

Spain's colony in the Philippines and the system of dependent exploitation it was built upon can only be understood in the larger context of the environment.

The last historiographical tradition related to this study is that of world history. Composing a thorough explanation of how the Manila-Acapulco galleon trade came to be and how it was sustained for so long in such a punishing environment so distant from Europe requires the adoption of a world historical perspective. Not only did the Manila-Acapulco galleon trade serve as a key link in the developing early-modern global economy—which is itself a topic of world history—but understanding the creation of Spain's Pacific trade necessarily involves crossing into multiple disciplines and disparate fields of research (as outlined in the above paragraphs). The Pacific galleon trade weaves together such topics as maritime history, global commerce, the colonial Philippines, early-modern Southeast Asia, the environment, and Spanish imperial history, amongst other fields. To give such a narrative coherence one must utilize viewpoints and methods of the world history tradition. Much has been done to address individual aspects of the galleon trade within specific contexts; however, much is left out if historians do not break new ground and attempt to incorporate multiple points of view and create a dialogue between multiple historiographical fields. The Manila-Acapulco galleon trade was, without question, a maritime trade route of global dimensions and significance, and therefore must be treated as such to be properly understood.

Outline and Contents of the Work

Chapter 1 will explicitly outline the central arguments and conclusions of this dissertation and orient the key arguments within the larger framework of recent world history scholarship. The

case will be made that that the development of the Acapulco-Manila galleon trade was only made possible by drawing upon the many resources of the Southeast Asian maritime commercial zone, of which Manila and the Philippines were integral components. In this regard, the Manila galleon trade will be considered within the context of Asian socio-economic development. From such a approach it will be made clear that the trans-Pacific trade was largely forged from Asia, not from Spain or the New World. Spanish mariners, shipbuilders, and navigators experienced such extreme difficulty in reaching Southeast Asia in the first half of the sixteenth century that establishing a colonial foothold in the region was impossible without large-scale systematic exploitation of indigenous peoples and natural resources on the far side of the Pacific. Though Ferdinand Magellan and his fleet made landfall in the Philippines on behalf of the Kingdom of Spain in 1521, it was not until the 1570s that a successful Spanish outpost was established in the archipelago. For Spain's men of the sea, the intervening years were a prolonged struggle to come to grips with the immense distance of the *Mar del Sur*, which, as was dictated by the Treaty of Tordesillas, had become Spain's only avenue to the Orient.

Chapter 1 will establish the major obstacles Spain's men of the sea faced in reaching Southeast Asia and then will move on to outline the remedies and the specific means by which a trans-Pacific trade was ultimately created out of Manila in the latter half of the sixteenth century. The challenges facing Spain's earliest voyagers across the Pacific were namely distance and the resulting attrition to both ships and crewmen. To alleviate the problem of distance and to bring an end to the high rates of fatality and failure in the *Mar del Sur*, Spaniards ultimately came to rely upon a range of Southeast Asian resources that were critical to the support of Spain's imperial objectives in the region. In Manila Bay, local ships, shipbuilders, laborers, timbers, food crops, merchants, navigators, and pilots, were all available for the benefit of Spain's beleaguered

Pacific voyagers. Chapter 1 will argue that Spain's fortunes in Southeast Asia improved following the conquest of Manila. The acquisition of Manila benefited Spanish interests because it was a developed port within a larger thriving Southeast Asian commercial trading network. As such, Spain's men of the sea were able to draw upon already existing human and material resources that were geared towards the manufacture and operation of sailing vessels. Furthermore, Chapter 1 will differentiate between the benefits Spaniards were able to draw from indigenous communities (mainly as laborers for shipbuilding) and the benefits gained from the material/environmental resources of the Philippines (mainly timber and other forest products, also for shipbuilding).

Chapters 2 and 3 will move backward in time to consider Spain's maritime experiences prior to the founding of Manila in 1571. In the half-century leading up to the forging of the Manila galleon trade a number of expeditions sponsored by various Spanish interests had attempted and failed to establish a presence in Southeast Asia. These early voyages are important to consider as they serve as vivid examples of why Spain's men of the sea were unable to establish connections with Asia under their own initiative—that is, without the sustained support of an Asian resource base. Chapter 2 will examine the very first set of voyages to attempt to colonize Southeast Asia, which sailed directly from Seville and Coruña. By utilizing primary source accounts of these first voyages to the Philippines it will be clearly shown that mariners faced insurmountable obstacles in even reaching the Philippines via a Pacific crossing. Beginning with Ferdinand Magellan's voyage of 1519 – 1522 (which was the only successful voyage to reach Asia and return to a Spanish port prior to the 1560s), Chapter 2 will demonstrate that Spain's European ports were much too distant to wield any sort of control in Asia. Sailing the 16,000 miles from Europe, across both the Atlantic and Pacific Oceans, exacted a level of

attrition far greater than could reasonably be coped with by the sailors and vessels of the era. Even with the miraculous return of the *Victoria* in 1522, voyaging via the Straits of Magellan had proven so difficult that by 1527 the Spanish crown had given up on the mission of connecting Seville directly to the Spice Islands. Studying these earliest voyages and the failure of Seville to plug directly into the Asian marketplace serves to underscore the importance of the future establishment of Asian colonial harbors, namely Manila.

Chapter 3 will continue the narrative and investigate the move to organize and outfit voyages from the Pacific coast of New Spain, which was much closer to the coveted islands of Southeast Asia. The first trans-Pacific fleets to departed western Mexico did so in the late 1520s. While departing from the Pacific coast of Mexico cut the distance to the East Indies by roughly half, shipbuilding in the New World in the sixteenth century was so greatly underdeveloped that these voyages fared even worse than their predecessors. Securing the resources required to build oceangoing vessels in New Spain in the early sixteenth century was possible, but financially prohibitive. Hernán Cortés, amongst other wealthy Spaniards in the New World, spent fortunes building ships on the Pacific coast and achieved next to nothing for their efforts. Chapter 3 will argue that developing productive shipbuilding centers along the Pacific coast of the New World in the sixteenth century was simply not a realistic goal. The establishment of a viable shipbuilding industry on the Pacific coast of the New World had been a goal since Vasco Núñez de Balboa first sighted the vast *Mar del Sur*. To reconnoiter this new body of water the famous conquistador had constructed, with tremendous difficulty and expense, a small fleet of ships in 1518 along with what is today the southern coast of the Isthmus of Panama. Labor and materials were too scarce and the colonial infrastructure at the time was so far underdeveloped that the vessels produced were inferior and exorbitantly expensive. This was the case along the entire

American Pacific coastline in the sixteenth century. By the 1560s every vessel Spain had dispatched across the Pacific (from either Europe or the New World) had been lost, wrecked, or otherwise ruined—the only exception being Sebastian del Cano's *Victoria*, which had barely made it to Seville from Tidore in 1522. All told six Spanish fleets had been dispatched to Southeast Asia following the marginal success of Magellan, and all six had met absolute ruin.

Following decades of struggle in the *Mar del Sur*, Spaniards had made no territorial or commercial gains in Southeast Asia. Over the course of six failed expeditions the Pacific had proven itself too vast and shipbuilding in Europe and the New World was found to be too unreliable to make such a grueling voyage possible. Taken together, Chapters 4 and 5 will move on to show that the trans-Pacific galleon trade was ultimately established and maintained only through the aid of indigenous laborers and the superior material resources in the Philippines, particularly in and around the relatively densely populated Manila Bay region. Chapter 4 will focus on the importance of the human and material resources made available to Spaniards in the Philippine archipelago itself. Making laborers out of the *Indios* of the Philippines was necessary if Spain's men of the sea were to ever develop a sustainable shipbuilding industry in Asia. *Indio* laborers were exploited in concert with Philippine timbers, fibers, and other forest products, all of which were utilized for ship construction. Chapter 4 will show that Philippine timber was cheaper to procure and of a superior quality than what was available in Europe. Without Asian labor gangs and the many local materials available for shipbuilding and repair in the Philippines, maintaining a trans-Pacific connection and a colonial presence in the remote archipelago would have been a financial and logistical impossibility. The shipyards of Europe offered almost no help whatsoever in the Pacific as they were simply too distant. Thus only through the forging of a brutally exploitative relationship with the indigenous population of the Philippines, particularly

in and around Manila Bay, were Spain's men of the sea at long last able to overcome the issues of distance and forge (and sustain) a regular trans-Pacific link with Mexico in the 1570s.

Chapter 4 will also show that the numerous demands of maintaining the Pacific galleon trade—which rapidly developed following the 1571 conquest of Manila—not only dictated a great deal of Spain's imperial agenda in the Philippines, but, more importantly, collectively constituted a major source of social stress upon the indigenous population in the archipelago. The maintenance and construction of Spain's Pacific galleons was a massively demanding labor obligation that Spaniards forced upon their native *Indio* subjects. The galleon trade required thousands of indigenous workers engaged directly at the shipyards and thousands more who were forcibly recruited into numerous services ancillary to the shipyards, such as the felling of timber, the weaving of rope and sailcloth, and the harvesting of food and collection of other vital supplies for the Pacific crossing and the continued operation of the shipyards. There were also a number of taxes and tributes exacted from indigenous communities that supported the maintenance of Spain's Pacific galleons. To meet these labor and tribute demands, entire communities were forcibly relocated while others fled into the interior to avoid service.

Chapter 5 will examine the role the *Indios* of the Philippines played at sea, both as servants of the galleon trade and as defenders of the Spanish colony. Many *Indios* found themselves aboard the very galleons they helped build, having been conscripted into service as crewmen. Many *Indios* transported across the *Mar del Sur* established diaspora communities along the Pacific coast of New Spain rather than risk a return voyage.¹⁰⁰ The numbers of Philippine *Indios* transported across the Pacific in service of Spain's galleon trade ranged well into the tens of thousands. Indeed, *Indios* (or *Chinos* as they were relabeled in the New World)

¹⁰⁰ Floro L. Marcene, *Manila Men in the New World: Filipino Migration to Mexico and the Americas from the Sixteenth Century* (Manila: University of the Philippines Press, 2007).

comprised the majority of Spain's galleon crews in the Pacific for the entire colonial period, sometimes accounting for 80 – 90% of those aboard a galleon. Another change wrought by the galleon trade was the widespread population decline that resulted from *Indio* service during wartime. Chapter 5 will take special care to examine the roles *Indios* played in the most prolonged and demanding conflicts of Spain's tenure in the Philippines: the Hispano-Dutch War and the *Moro* wars of the early to mid-seventeenth century. The cumulative effects of these wars saw *Indio* tribute registers drop from roughly 611,000 in 1621 to 505,000 by 1655.¹⁰¹ Sporadic warfare with *Moro* slave raiders similarly took their toll. The defense of the Spanish colony required greatly increased inputs of labor and tribute while at the same time reducing the food supply to the general population. The defense of the colony also required that many *Indio* subjects take to the sea aboard local warships and patrol craft, laboring as rowers, pilots, and even combatants in Spain's wars at sea.

Taken together, Chapters 4 and 5 demonstrate that Spain's trans-Pacific galleon trade was largely created in Asia, not in Seville or Acapulco, and was created through the toil and expertise of mostly Asian (not European) laborers. It will be made clear that the demands of maintaining the Manila-Acapulco galleon trade fell primarily upon the shoulders of the native *Indios*, and fulfilling such duties brought about many sweeping changes to indigenous society.

From this study we will be able to draw a number of conclusions. First, the indigenous peoples of the Philippines were instrumental in enabling Spanish mariners to successfully bridge the Pacific—a feat that Spain's men of the sea had failed to achieve on their own after nearly five decades of failed attempts. Without the coerced labor and material contributions of the local population of the archipelago the maintenance and regular operation of the Manila galleons

¹⁰¹ Phelan, *The Hispanization of the Philippines*, 100. Similarly, Jesuit parishes in the Visayas reported a drop from 74,600 natives in 1622 to 52,269 in 1659.

would have been wholly impossible. Second, that the environmental resources of the Philippines, namely timber, sailcloth, hemp, and various mixtures for pitch and caulk, proved to be instrumental in not only repairing and maintaining Spain's Pacific fleet, but in constructing new vessels that were far more durable than the vessels of Europe or New Spain. Lastly, it will be argued that the human and material resources of the Philippines were exploited as part of a larger and highly adaptive system of dependency. Such exploitation, the demanding tributes exacted from the local population, and the various coercive labor systems to which they were subjected were responsible not only for the upkeep of the Pacific galleons but for a number of social changes within indigenous society. The conclusion section of this study will move beyond these specific points and consider the place of this dissertation within the major current historiographic threads of world history.

CHAPTER 1

Southeast Asian Dynamism and Spanish Dependency: The Foundations of Spain's Colonial Presence in Southeast Asia

...the preponderant majority of Asian shipping, albeit with goods of whatever origin and engaged in legal as well as contraband trade among Asian ports, was on Asian ships built with Asian materials and labor of West, South, East, and Southeast Asian origin and financed by Asian capital. Thus, shipping, naval and port construction, and their maintenance and finance were in and of themselves already a major, continuing, and growing “invisible” industry all around Asia, which dwarfed all European interlopers probably until the nineteenth-century advent of the steamship.¹⁰²

Andre Gunder Frank, *ReOrient*, 1998

Iberian mariners arriving in Southeast Asia in the sixteenth century were entering a region of lively commercial exchange and markedly advanced economic development.¹⁰³ This chapter argues that Spain's trans-Pacific seafarers of the sixteenth century, while initially struggling to survive in Southeast Asia, ultimately found that as a result of the region's developed maritime shipping economy, many of the port cities and coastal communities throughout the region were capable of providing all the resources necessary for the creation and upkeep of a colonial base. The vast and productive “invisible industry” of East and Southeast Asian shipping and shipbuilding that Gunder Frank speaks of was the most vigorous in all the Pacific in the sixteenth

¹⁰² Frank, *ReOrient*, 176.

¹⁰³ For surveys of commercial and political development in early modern maritime Southeast Asia, see Reid, *Southeast Asia in the Age of Commerce*; Lieberman; Lockard; Abalihin; Frank.

century and remained so for the entire early modern era. Spanish mariners had struggled for decades to establish their own colonial foothold in Asian waters without local aid, and these efforts failed as a result. Rather than tap into and utilize the Asian shipbuilding network, Spain's Pacific mariners sought to extend their own resources bases, first from Spain and then from New Spain. Both ventures failed. Following Magellan's demise at Mactan in 1521, it would be a further forty-four years before a colony was established in the Philippine archipelago. As this and later chapters will demonstrate, effective Spanish control over the Philippines—or any part of Southeast Asia for that matter—only came to bear once trans-Pacific mariners had established a colonial foothold within an already developed Asian port city and had begun to reap the benefits of Asian maritime networks. Doing so ensured ready access to a gamut of locally available resources, most vital of which were abundant supplies of cheap and skilled labor, communities of knowledgeable seafarers and shipbuilders, surplus agricultural products, a range of shipbuilding materials—most important of which was timber—as well as access to established and flourishing trading networks. Exploiting key Asian port cities for their resources and trade connections was a strategy effectively utilized by the Portuguese as early as Vasco da Gama's arrival in the Indian Ocean basin. This helps to account for the rapid spread of Lusitanian shipping throughout South and Southeast Asia in the early sixteenth century.¹⁰⁴ It was not simply that the Spanish were slow to recognize the importance of establishing access to major port cities. Their lagging development in Asian waters for the first half of the sixteenth century was also due to the vastness of the Pacific and the continent-sized obstacle of the Americas, two

¹⁰⁴ A concise analysis of the structure of Portugal's overseas empire versus that of Spain's is offered in Subrahmanyam, "Holding the World in Balance." For Portuguese strategy in the Indian Ocean and dependence upon local resources, see Russell-Wood, 18 – 26, and more generally, M. N. Pearson, *The Portuguese in India* (Cambridge: Cambridge University Press, 1987); R. A. Disney, *A History of Portugal and the Portuguese Empire: Beginnings to 1807*, 2 volumes (New York: Cambridge University Press, 2009).

major hurdles that the Portuguese did not have to contend with. Nevertheless, the importance of harnessing the support structure of a major port city was made all the more clear when one considers that trans-Pacific commerce was established only *after* the founding of Spanish Manila in 1571.

This chapter will introduce the range of resources that became available to seafarers, merchants, and missionaries at Manila Bay and will weigh their importance within the larger context of Spanish commercial and colonial efforts in Southeast Asia. It will be argued that Miguel López de Legazpi's decision to relocate his colonial headquarters from the sparsely populated underdeveloped Visayas to the much more densely populated and commercially established port of Manila was the single most important decision in the development of a sustainable colony in Southeast Asia and for the establishment of a trans-Pacific trade with New Spain. In subjugating the peoples of Manila Bay Spaniards at once gained access to a lively center of shipbuilding, fertile agricultural lands, an array of forest products for shipbuilding and repair, as well as active commercial connections to greater Southeast and East Asia. It would be difficult to overestimate the importance of Chinese merchant networks to the success of Spain's colony at Manila. Chinese merchant communities in the Philippines provided the access to the larger Asian world-economy that Spain's men of the sea had struggled to tap into for much of the early sixteenth century.¹⁰⁵ In other words, by moving to Manila, Spaniards found at their disposal all the resources necessary to cultivate and sustain their own political, religious, and commercial aims in the region.

The vitality of Southeast Asian commerce offered a great many benefits to European mariners, the most important of which was a long-standing and highly developed shipbuilding

¹⁰⁵ For more on the Chinese as a decisive force in the shaping of Manila and the early Spanish Philippines, see Tremmel's article, "When Political Economies Meet."

and seafaring tradition amongst the numerous coastal communities of the region. The navigational knowledge and skill of local seafarers would prove indispensable to Spain's men of the sea in particular, who struggled to come to grips with the winds and unpredictable currents in and around the Philippine archipelago. From these local seafaring communities Spaniards also gained access to a variety of local vessel designs that were in many ways superior to their own. Local knowledge of hardwoods and building techniques supplemented Spain's own efforts at shipbuilding in the Philippines.¹⁰⁶ The environment of Luzon provided a number of material resources as well, including a suite of forest products for shipbuilding and repair and surplus food from the fertile lands surrounding Manila Bay. Of greatest importance to Spanish commercial interests in Asia was timber, which the Philippine archipelago had in abundance. Hardwoods suitable for ship construction were the lifeblood of any maritime empire in the age of sail and Spaniards in the Philippines were doubly dependent upon the many varieties of hardwoods available on Luzon due to the long and punishing nature of the Pacific crossing, which necessitated extensive repairs to the both the hull and superstructure of Spain's galleons after just a single Pacific crossing. The constant threat of seaborne attack from either the Dutch, Chinese, Portuguese, Japanese, or *Moros* put added pressure on the shipbuilding industry of the Spanish Philippines. Shipbuilding demanded tremendous inputs of strong, mature timber in conjunction with organized indigenous labor.¹⁰⁷ In addition to timber, the Philippines also had

¹⁰⁶ Soon after the establishment of Spain's first shipyard in the Philippines at Cavite, new types of wood started featuring in government reports. Tagalog and other Southeast Asian labels for these foreign varieties of timber would suggest that the indigenous population of the archipelago served as brokers of local ecological knowledge. For more on this, see chapter 4.

¹⁰⁷ It is widely recognized in historical scholarship that timber was a vital resource for states in the medieval and early modern periods, particularly when it came to the maintenance of maritime empires, the consolidation of state power, national defense, and the development of trans-oceanic commerce. Works in this field are numerous. A few recent examples include, John T. Wing, "Keeping Spain Afloat: State Forestry and Imperial Defense in the Sixteenth Century,"

abacá, a hemp-like material that was ideal for making rope. Rope was a major (and often expensive) component of sailing vessels and the availability of local supplies of fibers was hugely important to shipbuilding efforts in the Philippines. There were also a number of coastal settlements throughout the archipelago engaged in the manufacture of sailcloth, which the Spaniards readily exploited and found to be cheaper yet far superior in quality and durability than anything available in Europe.¹⁰⁸ Further supplementing ship production and maintenance in the Philippines were the established trade routes that connected Manila with mainland Asia. Such connections, particularly to China and Chinese merchant networks, enabled the importation of manufactured items like cannons, anchors, chains, and other key components not readily available otherwise. Also, we must count the productive agricultural province of Pampanga as yet another key resource for the development of shipping and commerce. Securing a reliable source of food was a necessary prerequisite to any effort at creating a sustainable colonial foothold so far from Europe, and Spaniards frequently noted the importance of the sustenance they gained from the high-yielding rice fields of the Pampanga River which ran north to south into Manila Bay.¹⁰⁹ In a great many respects then, the environment of the Manila Bay region was an important contributing factor to Spanish success in the region.¹¹⁰

Environmental History, 17 (2012): 116 – 145; Karl Appuhn, *A Forest on the Sea: Environmental Expertise in Renaissance Venice* (Baltimore: Johns Hopkins University Press, 2009); John F. Richards, *The Unending Frontier: An Environmental History of the Early Modern World* (Berkeley: University of California Press, 2003); Conrad Totman, *The Green Archipelago: Forestry in Pre-Industrial Japan* (Berkeley: University of California Press, 1989); Paul Warde, “Fear of Wood Shortage and the Reality of the Woodland in Europe, c.1450 – 1850,” *History Workshop Journal* 62 (2006): 28 – 57.

¹⁰⁸ Sebastian de Pineda, “Philippine Ships and Shipbuilding,” 26 May, 1619, Blair and Robertson, 18: 169 – 170.

¹⁰⁹ Larkin, *The Pampangans*, 1 – 40.

¹¹⁰ Shipbuilding required a vast complex of labor, skill, and raw materials, making it one of the most “advanced” industries of the early modern era. In order to create a viable shipbuilding center, it was necessary to secure timber, hemp, iron components, and sail cloth and combine it

However, much of Spain's imperial mission in the Philippines rested just as much upon local labor as it did environmental resources and local knowledge. Spaniards in the Philippines—be they *peninsulares* or American-born creoles—were particularly desperate for cheap labor as they never numbered enough to maintain the colony. Some estimates put the total “Spanish” population of Manila in the early seventeenth century at a mere 300, and prior to 1650 Spaniards never numbered more than 2,000 or 3,000.¹¹¹ In 1588 the report of Bishop Domingo de Salazar claimed that “Manila was home to about thirty bureaucrats and nearly fifty priests.”¹¹² Complementing these officials were 200 soldiers from New Spain and a mere eighty people that could be counted as *vencinos* (citizens). By 1600 this number had grown to 300 or 400 *vencinos*.¹¹³ With so few personnel on hand, laboring duties fell to the subject population.

Within the developing colonial structure of the Philippines, one of the biggest consumers of labor was the construction and maintenance of sailing vessels. The Spanish Philippines relied upon the large trans-Pacific galleons to maintain commercial ties with New Spain, and the manufacture of a great many more smaller vessels were necessary to orchestrate local transport, trade, communication, and defense against Muslim (*Moro*) raiders from Mindanao, Sulu, and

with the labor and food resources necessary to sustain production. Shipbuilding in this regard can be seen as operating within the logic of a commodity chain. See Immanuel Wallerstein (with Terence Hopkins), “Commodity Chains in the World-Economy Prior to 1800,” in *The Essential Wallerstein* (New York: The New Press, 2000), 221 – 233. For shipbuilding as a complex, and “advanced” early-modern industry, see Fernand Braudel, *Civilization and Capitalism, 15th – 18th century*, vol. 2, *The Wheels of Commerce* (New York: Harper & Rowe, 1983). This discussion of the material and labor demands of shipbuilding will be explored in further detail in chapter 4.

¹¹¹ John E. Wills Jr., “Relations with Maritime Europeans, 1514-1662,” in *The Cambridge History of China*, vol. 8, ed. Denis Twitchett and Fredrick W. Mote (New York: Cambridge University Press, 1988), 554; Onofre D. Corpuz, *Roots of the Philippine Nation*, volume 1 (Quezon City: Aklahi Foundation, 1989), 515 -550. Wills states that in 1586 only 2,000 Spaniards were living in the Philippines, compared to the roughly 10,000 Chinese merchants. For comparison, the recorded tribute-paying *Indio* population of the Philippines in the early seventeenth century exceeded 500,000.

¹¹² Newson, 119.

¹¹³ Newson, 119; Blair and Robertson, 7: 29 – 51.

elsewhere. *Indio* labor was utilized in the felling of timber in the mountainous interior of Luzon and in the shipyard of Cavite and a number of other locations. The exploitation of *Indio* labor extended to the sea as well. Spain's colonial subjects were made to serve as crewmen aboard the very vessels they helped to construct. Most every Spanish galleon to cross the Pacific from the Philippines in the sixteenth and seventeenth century had a crew that was at least 60% of Asian origin. Coercing labor from the local population on such a scale was only possible because of the relatively dense population at Manila and the surrounding provinces. This demographic pattern contrasted greatly with the relatively sparsely settled Visayas where so many of Spain's colonial projects failed to take root earlier in the sixteenth century. Admittedly, the nature of the Spanish colonial labor system has been exhaustively studied. This dissertation will take a unique approach and divide the contributions of *Indio* labor to those duties carried out on land (Chapter 4), such as the felling of timber, and those duties carried out at sea (Chapter 5), such as piloting galleons and rowing aboard galleys. Before we begin an account of these vitally important human and material resources of the Philippines, let us first consider the context in which they were made available for exploitation by the Spanish.

The advanced shipbuilding and seafaring traditions of Southeast Asia that would come to form the foundational support structure for Iberian commerce in the region were themselves indications that maritime Southeast Asia had been a prosperous and lively zone of commercial activity long before the arrival of Europeans. Understanding the larger background of Southeast Asian commercial development prior to European contact puts into perspective the dependent nature of European success in the region and the reasons behind the galleon trade's eventual development at Manila.

The Context of Southeast Asian Commercial Development

One cannot understand the establishment of the Acapulco-Manila galleon trade without first understanding the commercial context and history of the Southeast Asian region in the fifteenth and sixteenth centuries. In the larger setting of world history, maritime Southeast Asia in the early modern era was a crossroads of commercial and cultural exchange.¹¹⁴ The region benefited greatly from its position between the economic powerhouses of East Asia and the Indian Ocean basin as well as the seasonal ebb and flow of the monsoon winds, which, as Fernand Braudel rightly describes, were a “huge sum of free energy,” that fueled commerce across Asia.¹¹⁵ By the fifteenth century Southeast Asia had become a bustling intermediary zone across which ships, merchants, missionaries, and trade goods passed in great numbers. In light of recent world historical scholarship that has developed in conjunction with the work of Asian economic specialists, it is clear that Southeast Asia’s great “age of commerce,” to borrow the words of Anthony Reid, began well before the arrival of Europeans.¹¹⁶ Cotton textiles, diamonds, silver, copper, glass and countless other goods from India and throughout the Indian Ocean basin arrived annually at the many growing port cities in Southeast Asia. These goods arrived alongside Indian merchants, slaves, missionaries, and various sojourners. Together, goods and people found their way to centers like Aceh, Bantam, Ayutthaya, Makassar, Mataram, and

¹¹⁴ The recent literature addressing Southeast Asia’s place in early modern global commercial activity and cross-cultural exchange is vast. Key works include, Frank; Philip D. Curtin, *Cross-Cultural Trade in World History* (New York: Cambridge University Press, 1984); Flynn and Giráldez, “Born with a ‘Silver Spoon,’” 201-22; Reid, *Southeast Asia in the Age of Commerce*; Lieberman; Donald F. Lach and Edwin J. Van Kley, *Asia in the Making of Europe*, 3 volumes (Chicago: University of Chicago Press, 1993 – 1998).

¹¹⁵ Braudel, *The Wheels of Commerce*, 121.

¹¹⁶ Reid, *Southeast Asia in the Age of Commerce*.

Malacca, each of which were thriving ports with populations nearing 100,000.¹¹⁷ Also filtering into these entrepôts were camphor and iron tools from Japan as well as silks, porcelains, tea, medicine, and copper cash from Ming China. Chinese merchant diaspora communities played particularly prominent roles in developing most every major Southeast Asian port city, Manila included.¹¹⁸ Local trading communities throughout Southeast Asia offered many exotic goods in exchange for these imports. Pepper, clove, nutmeg, mace, aromatic woods, and pearls as well as more common items like tin and deerskins found their way aboard local Southeast Asian vessels, which then relayed their cargoes through these same entrepôts and then out into the larger world. All of this inter-regional commerce of course took place amidst a voluminous local trade, confined within the waters of Southeast Asia and centered on the traffic of bulk items, such as slaves, rice, textiles, and various products of the sea.¹¹⁹

Although situated on the periphery of much larger and more “developed” mainland commercial centers, coastal communities in the Philippines, the Sulu Archipelago, Java, Sumatra, Borneo and many other island regions all actively engaged in a thriving commerce that was almost always seaborne. As such, shipbuilding and seamanship became the hallmarks of successful maritime polities throughout the region during this era. By the time of Afonso de Albuquerque’s conquest of the Straits of Malacca in 1511, Southeast Asia’s seaborne commerce

¹¹⁷ Frank Broeze, ed., *Brides of the Sea: Port Cities of Asia From the 16th – 20th Centuries* (Honolulu: University of Hawaii Press, 1989).

¹¹⁸ Geoff Wade and Sun Laichen, eds., *Southeast Asia in the Fifteenth Century: The China Factor* (Singapore: NSU Press, 2010); Antony Reid, ed., *Sojourners and Settlers: Histories of Southeast Asia and the Chinese*, 2nd edition (Honolulu: University of Hawaii Press, 2001).

¹¹⁹ Recent works on the development of inter-regional as well as local maritime trade in early-modern Southeast Asia include, Kenneth R. Hall, “Revisionist Study of Cross-Cultural Commercial Competition on the Vietnam Coastline in the Fourteenth and Fifteenth Centuries and Its Wider Implications,” *Journal of World History* 24 (2013): 71 – 105; Tremml; Jennifer L. Gaynor, “Ages of Sail, Ocean Basins, and Southeast Asia,” *Journal of World History* 24 (2013): 259 – 307; Lockard.

had long since come to be dominated by long-haul cargo vessels capable of carrying up to 400 tons of goods, which was larger than many European vessels at the time.¹²⁰ These trading vessels operated out of countless ports from the Bay of Bengal to Malacca and Java; from Tonkin to Sulu and Mindanao. And amongst these larger cargo vessels were scores of smaller regional commercial craft carrying out local coastal trade. It was often the case that these vessels far outnumbered, outmaneuvered, and outpaced the clunky Portuguese and Spanish carracks and *naos*.¹²¹

By the mid twentieth century only a handful of historians had recognized the fact that Southeast Asia was an independently thriving economy that withstood and overshadowed European efforts at control and regulation for many centuries. The most notable case was of course J. C. van Leur, who focused his attention on early seventeenth-century Indonesia and challenged the claim that this was a period when Southeast Asian commerce had been subjugated by an ascendant and hegemonic Dutch power. Van Leur's research for the year 1622 places total VOC shipping at 14,000 tons versus 50,000 tons of cargo shipped by Indonesian merchants alone.¹²² Generally, van Leur's research worked to minimize the impact of Europe and

¹²⁰ J. C. van Leur, *Indonesian Trade and Society: Essays in Asian Social and Economic History* (The Hague: W. van Hoeve, 1955), 126.

¹²¹ For a good summary of the major historical interpretations of Portuguese penetration into the waters of South and Southeast Asia and the success of Iberian versus Southeast Asian shipping, see Glete, *Warfare at Sea*, 76 – 92.

¹²² Van Leur, 235. I take issue with Fernand Braudel's criticism of van Leur's assessment of South and Southeast Asian maritime traders as well as his larger treatment of Southeast Asia as a commercial zone. According to Braudel, van Leur saw the majority of maritime commerce as having been conducted by "peddlers" dealing in small trinkets and luxury items. This somewhat misses the mark. Van Leur makes the point time and again that Indian Ocean and Southeast Asian commerce had developed many long distance trade routes in bulk items, such as cotton textiles, rice, and slaves. Maritime Southeast Asia should be viewed as a world-economy in its own right, having both bulk trade and long-distance exchange networks, divisions of labor, and thriving communities of merchant capitalists. Braudel says as much in his third volume of *Civilization & Capitalism*, but ultimately finds only three world-economies in Asia: the Islamic,

underscored the dominance of Southeast Asian commerce well beyond the seventeenth century. For much of the twentieth century, however, such voices were drowned out by those who touted a supposed European dominance of Asia, commercially, politically, and militarily in the early modern era. In the most extreme case K. M. Panikkar famously argued for the “Vasco da Gama Epoch” in Asian history, a period of unquestioned European domination of the seas stretching from 1489 to the Second World War.¹²³ It is a sad fact that only recently, say in the last twenty years, has such Euro-centric and oversimplified interpretations of the past been systematically challenged by more globally minded scholars. In reality, as we will see below, Portuguese, Dutch, and Spanish mariners entering the Indian Ocean and Southeast Asian trading system in the early sixteenth century were nothing more than interlopers, pirates, parasites, and bit players. What is more, the major centers of Asian (and world) commerce would continue to be Asian controlled for hundreds of years following initial European contact. Further still, we cannot overlook the fact that instances of European commercial and political development in Southeast Asia were erected upon Southeast Asian commercial foundations. For the entirety of the early modern era it was almost always the case that Europeans could turn a far greater profit participating in the “country trade” of Asia rather than in the “company trade” back to their respective metropole.

The most recent works in world history that fully address the apparent disparity between Western European and Asian commercial development in the early modern period have

the Indian, and the Chinese. Southeast Asia is but an intermediary zone in the Braudelian framework. Braudel, *The Wheels of Commerce*, 120 – 121; Braudel, *Civilization and Capitalism, 15th – 18th century*, vol. 3, *The Perspective of the World* (New York: Harper & Rowe, 1984), 484.

¹²³ K. M. Panikkar, *Asia and Western Dominance: A Survey of the Vasco da Gama Epoch of Asian History, 1498 – 1945* (London: George & Allen Unwin, 1953).

concluded that the emerging global economy was in many respects Asian-centric. Asian specialists such as Kenneth Pomeranz, Anthony Reid, R. Bin Wong, K. N. Chaudhuri, and Robert B. Marks have all argued, in one way or another, for an Asian-centric model of the early modern world.¹²⁴ Their findings have been supported by many globally minded scholars working outside the field of Asian history, including Dennis O. Flynn, Arturo Giráldez, Janet Abu-Lughod, Andre Gunder Frank, Barry K. Gills, and many others.¹²⁵ The general consensus now emerging within world historical scholarship is that Western Europe's politico-economic gains in Asia were modest, if not completely eclipsed by the larger economies of the East, and that this remained so until 1750/1850 and the advent of industrialization, steamship technology, and the development of "modern" forms of imperialism.¹²⁶ Of course this is not to say Europeans did not enjoy a fair measure of commercial success in Asia in the early modern era. It must be understood however that such success—by whatever metric—was predicated upon a much further developed Asian world-economy and that Portuguese and Spanish participation in Asian maritime commerce was gained only through a dependent relationship with local agents, and also often through a hefty fee of New World silver. In his sprawling three-volume history of the early

¹²⁴ Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World* (Princeton: Princeton University Press, 2000); Reid, *Southeast Asia in the Age of Commerce*; R. Bin Wong, *China Transformed: Historical Change and the Limits of European Experience* (Ithaca: Cornell University Press, 1997); K. N. Chaudhuri, *Trade and Civilization in the Indian Ocean: An Economic History from the Rise of Islam to 1750* (Cambridge: Cambridge University Press, 1985); Chaudhuri, *Asia Before Europe: Economy and Civilization of the Indian Ocean from the Rise of Islam to 1750* (Cambridge: Cambridge University Press, 1990); Robert B. Marks, *The Origins of the Modern World: A Global and Ecological Narrative* (New York: Rowman & Littlefield, 2002).

¹²⁵ Flynn and Giráldez, "Born Again: Globalization's Sixteenth Century Origins"; Flynn and Giráldez, "Born with a 'Silver Spoon'"; Janet Abu-Lughod, *Before European Hegemony: The World System A.D. 1250 – 1350* (New York: Oxford University Press, 1989); Frank, *ReOrient*; Andre Gunder-Frank and Barry K. Gills, eds., *The Modern World System: Five Hundred Years or Five Thousand?* (New York: Routledge, 1994); Pomeranz, *The Great Divergence*; Marks, *The Origins of the Modern World*.

¹²⁶ Marks.

modern world, *Civilization and Capitalism*, Fernand Braudel argues that European gains were most assuredly forged on top of Eastern (or Asian) commercial structures.

During the centuries of exploitation, the Europeans had the advantage of being faced with rich and developed civilizations, with agriculture and artisan manufacture already organized for export, with trading links and efficient intermediaries everywhere... Instead of starting from scratch as they had to in America, the Europeans in the Far East exploited and diverted to their own ends a solidly-constructed trade system. Only their silver enabled them to force these doors. And it was only at the end of the period that military and political conquest, leaving Britain ruler of the East, seriously disturbed these ancient balances.¹²⁷

From such a world historical context as this it should be clear that the Manila-Acapulco galleon trade was made possible by tapping into a commercially developed Asian maritime economy (or world-economy, or world-system). Let us also not overlook the global-level conjuncture of highly productive American silver mining coming online just at the exact time it was needed by New Spain's merchant mariners to buy into the Asian marketplace.¹²⁸

This then was the world historical context of Spain's arrival in Southeast Asia in the 1500s. Fledgling bands of starving Spaniards, arriving one after another many years apart, aboard ships worm-eaten and tattered by the long Pacific crossing, found themselves in the midst of a dynamic and thriving zone of political-economic development and lively commercial interaction. Innumerable port cities from southern coastal China to the Straits of Malacca offered needy Spaniards supplies for ship repair and construction, carpenters and shipwrights, rope-makers and sailcloth weavers, food, clean drinking water, skilled navigators for hire, and, of course, the valuable spices and other luxury goods that European markets so greatly desired. Some may find it curious then that it took Spain's men of the sea nearly half a century to

¹²⁷ Braudel, *Wheels of Commerce*, 447.

¹²⁸ Robert B. Marks utilizes the concepts of accident, contingency, and conjuncture to succinctly explain Spain's entry into the Asian world system using New World money. Marks, *The Origins of the Modern World*.

establish a workable colonial base from which these resources could be utilized and made to support a permanent commercial base. While the Magellan expedition of 1519 – 1522 did manage to forge a temporary alliance with the natives of Tidore for food as well as building materials and skilled labor to repair the badly damaged *Victoria* and *Trinidad*, it was not until 1571—after an additional six Spanish-sponsored expeditions had failed to establish a colony in Southeast Asia—that Miguel López de Legazpi finally hit upon a workable strategy for establishing a sustainable colony at Manila. As chapters 2 and 3 will show, when asking why the first Manila galleon did not sail until a half-century after Magellan’s landfall in the Philippines, one must consider the extraordinary distance Spaniards faced in reaching Asia, particularly when compared to their Iberian rivals. By the dictates of the Treaty of Tordesillas (1494), as well as a number of supplementary Papal Bulls, the much easier route to Asia via the Cape of Good Hope was off limits to the Spanish. Thus, while da Gama and his crew were trading with the merchants of Goa in 1498, Spain’s maritime explorers had yet to recognize the continental dimensions of their “New World,” nor had they yet laid eyes on the expansive *Mar del Sur*, which awaited them beyond the American horizon.

Traditions of Shipbuilding and Seafaring

The extent of Southeast Asia’s commercial development manifested itself in a number of ways, but none was more advantageous to newly arriving Europeans struggling to establish a presence in the region than the seafaring traditions and honed shipbuilding techniques employed by innumerable coastal populations throughout the region. The Philippines were part of a shipbuilding tradition centered on the manufacture of rather large and sophisticated vessels like

the *karakora* (*caracorás* in Spanish sources), a style of vessel which sailed the waters of the eastern half of Southeast Asia. European mariners found that it was a more or less common vessel type from the Philippines to the Spice Islands and Borneo.¹²⁹ *Caracorás* featured a double outrigger structure capable of supporting four banks of rowers, an exceptionally low draft for coastal navigation, and a tripod mast for additional speed when sailing with the wind. As a warship that often doubled as a trading vessel, many Spaniards noted that the *caracora* was far superior to their own designs and was ideally suited to the currents, winds, and shallow channels of Southeast Asia's extensive waterways and maritime networks. One account from Miguel López de Legazpi's 1564 expedition commented that local seafarers utilized the *caracora* "for sailing any place they wanted."¹³⁰ Father Francisco Combes, writing from the Philippines in the mid seventeenth century, marveled at the level of craftsmanship *Indio* shipbuilders displayed in the construction of *caracorás*, commenting that "the care and technique with which they build them makes their ships sail like birds, while ours are like lead in comparison."¹³¹ And although the *caracora* was a light outrigger vessel design, its size was substantial. Many Spanish accounts claim that such vessels could accommodate hundreds of rowers and soldiers when used in warfare. The Portuguese were similarly impressed with the local vessels they encountered upon entering the Malacca region. Western Southeast Asia was home to the *jong*,¹³² a large vessel

¹²⁹ William Henry Scott, *Boat Building and Seamanship in Classic Philippine Society* (Manila: National Museum, 1981).

¹³⁰ Isacio R. Rodriguez, *Historia de la Provincia Agustiniana del Smo. Nombre de Jesus de Filipinas*, volume 13 (Manila: 1978), 463.

¹³¹ Francisco Combes, *Historia de Mindanao y Jolo* [1667] (Madrid: 1897), 70. Cited from Bankoff, 45.

¹³² Pierre-Yves Manguin, "The Southeast Asian Ship: An Historical Approach," *Journal of Southeast Asian Studies* 11 (1980): 266 – 276; Pierre-Yves Manguin, "Trading Ships of the South China Sea: Shipbuilding Techniques and Their Role in the History of the Development of Asian Trade Networks," *Journal of the Economic and Social History of the Orient* 36 (1993): 253 – 280.

often with multiple masts and outfitted for both war and trade. The *jong* (variously termed *junco* in Portuguese sources) was in most cases larger than Portugal's own vessels, measuring up to 500 tons in cargo capacity, and was built without any iron or exposed metal like the *caracora*. The center for *junco* construction was the northern Java coastline, Borneo, and Pegu—such locations afforded shipbuilders plentiful timber, laborers, and access to busy trade networks.¹³³

It should be little wonder that Spaniards and Portuguese alike were quick to utilize local vessels for most every operation they carried out in Southeast Asian waters. Their own vessels were ill suited to navigating local waterways, deteriorated quickly in the humid air and shipworm infested waters of the tropics, and were exceedingly difficult to maintain so far from home. The Spanish were doubly dependent upon local sailing vessels as their own European and American-built galleons and brigantines were nearly unseaworthy after negotiating the Pacific crossing. The *San Jeronimo* serves as a typical example of the fantastic attrition the Pacific could inflict upon wooden sailing vessels. In 1566 the *San Jeronimo* arrived in the Philippines to support Legazpi's colonizing efforts, having departed New Spain only a few months prior. Upon inspection of the *San Jeronimo* by Legazpi's men it was decided that the ship was in such a poor condition that it would have to be dismantled. The official report of the inspection states that,

...the ship, *San Jeronimo* had come from Nueva España lately, leaking very badly and is maintained with great difficulty by the people. Through diverse means they have tried to plug the holes, drain the ship of water but have not succeeded [illegible] either from the inside or the outside. Instead, each day, it seems that the water increases.¹³⁴

¹³³ Manguin, "Trading Ships of the South China Sea," 267.

¹³⁴ "Testimony given by the officials of His Majesty on why the galleon *San Jeronimo* had to be dismantled," in Virginia Benitez Licuanan and Jose Llavadro Mira, eds., *The Philippines Under Spain: A Compilation and Translation of Original Documents* (The Philippines: National Trust for Historical and Cultural Preservation of the Philippines, 1993), vol. 2: 227.

The *San Jeronimo*'s problems, which were typical for vessels crossing the Pacific, stemmed primarily from the rotting of the hull, which itself was the result of exposed ironwork, shipworm infestation, and from simply being months on the open sea without the means to repair or maintain the vessel. The pilot of the *San Jeronimo* testified that the vessel was

“...very worm eaten...it leaks very much and each day it grows worse...they had tried to drain the water from it but they had not succeeded because it had been destroyed by worms...If it was to sail, it was necessary that a new keel be made... And the seams of the planks are more than three-fingers apart which is very dangerous. Furthermore, even if it were still in good condition it was unrigged. It lacks anchors and cables and so it does not have what are needed to sail.”¹³⁵

To be sure, much of this damage inflicted on Spain's trans-Pacific galleons came during the crossing, however, any time spent idle in the harsh Southeast Asian climate exacted a toll on European vessels as well. Frequent rains and high humidity quickly warped wood, frayed ropes and sails, and rusted nails and chains.¹³⁶ Worst of all for Spain's vessels (as was clearly the case with the *San Jeronimo*) was the damage wrought from worm infestation. Shipworms (*broma* or *torredos* in Spanish sources) were a common blight for wooden vessels operating in warm waters, particularly in the Caribbean and Southeast Asia. Unfortunately for the Spanish, the brackish water where the Pasig River empties into Manila Bay was a great source of shipworms, and their presence only served to further reduce the service life of vessels.¹³⁷ It is worth noting here that the life expectancy of European vessels in the sixteenth century was remarkably short, even when operating close to home in the Atlantic and Mediterranean. W. Brulez has conducted a thorough survey of primary source material on Dutch, Italian, and English shipping in the

¹³⁵ “Testimony given by the officials of His Majesty,” Licuanan and Llavadro, vol. 2, 223-224.

¹³⁶ Schurz, *The Manila Galleon*, 198.

¹³⁷ “An incomplete and unsigned letter of a religious to the Viceroy of Nueva España,” 1572 or 1573, Licuanan and Llavadro, 2: 370. “The river that traverses this city empties into the sea. The said river is heavily infested with Shipworms [illegible] in the port for the ship, it would be [illegible] if this is the [illegible] to seek a more healthful place with a better port in the future.”

sixteenth century and found that the average life for European-built vessels was a mere seven years in the sixteenth century.¹³⁸ If one were to take on a study of the service life of vessels in Spain's Pacific fleet during the same period, the results would certainly indicate a highly accelerated rate of attrition and retirement. Chapters 2 and 3 will vividly illustrate how every Spanish expedition that attempted a Pacific crossing, from Magellan (1519) to Legazpi (1564), had suffered tremendously from the decay of their ships. Therefore, Spain's colonial labor institutions in the Philippines were oriented not just towards the production of new vessels, but to the repair and refurbishment of damaged and decaying ships as well.¹³⁹

The decision to utilize local Asian sailing vessels also stemmed from the fact that local craft were so much better suited to the environment and geography of Southeast Asia, as many Spanish officials attested. Many vessels built in the Philippines and greater Southeast Asia were completed without the use of any iron whatsoever. When iron was used, care was taken not to leave it exposed to the elements. As Spaniards and Portuguese were soon to discover, exposed ironwork rusted quickly in the humid and moist climate of the region, exacerbating the already advanced decay of newly arriving European vessels. Ironless construction was achieved either through the use of wooden dowels along plank edging or via a lashing technique where individual planks were literally stitched together with rope along the interior face of the hull. Both methods yielded remarkably durable structures that were easily assembled and repaired and

¹³⁸ W. Brulez, "Shipping profits in the early modern period," in *The Low Countries History Yearbook* (The Hague: Uitgeverij Martinus Nijhoff, 1981), 67 – 70.

¹³⁹ For examples of *Indio* labor for shipbuilding versus repair, see Sebastián de Pineda, "Philippine Ships and Shipbuilding," 26 May, 1619, Blair and Robertson 18: 171-173; Juan de Medina, "History of the Augustinian Order in the Filipinas Islands," 1630, Blair and Robertson, 24: 85; Sebastian Hurtado de Corcuera, "Letter to Felipe IV," 11 July, 1636, Blair and Robertson, 26: 286; Casimiro Diaz, "The Augustinians in the Philippines, 1641 – 70," 1718, Blair and Robertson, 37: 211.

coped well in the Southeast Asian climate.¹⁴⁰ Archeological evidence suggests that galleons constructed in the Philippines still relied upon iron nails and fittings, but it is likely the case that most other smaller vessels used by the Spanish for local operations within Asian waters more closely conformed to local boatbuilding traditions of ironless construction.¹⁴¹

It should also be noted that it was not just *juncos* and *caracorras* which Europeans found plying the waters of Southeast Asia. The variety and abundance of local vessels present in just the Philippines was enough to impress many Spanish observers, and they recorded what they saw. Antonio de Morga reported on the lively local shipping he witnessed in the Philippines in the late sixteenth and early seventeenth century:

...vireyes and barangayes which are slender, light, low-lying boats held together with small wooden bolts and as narrow at the stern as at the prow. These carry a large number of oarsmen on either side who row the vessel with paddles...Above the oarsmen is a platform, or gangway, made of cane upon which the fighting-men stand...There too they hoist the sail, which is square and made form linen, upon a support made from two thick bamboos which serve as a mast...These ships have been used throughout the islands from earliest times; they have others, larger ones called caracoas, lapis and tapanques for carrying merchandise, which are very suitable indeed since they are roomy and draw little water...All the natives know how to row and manage these boats. Some are big enough to carry one hundred rowers each side and thirty soldiers besides. The most usual sort of boats are barangayes and vireyes which carry smaller crews and fewer people.¹⁴²

Local vessels, being quicker, lighter, more maneuverable, and of shallower draft than European *naos*, galleons, brigantines, or caravels, were far better suited to commerce, exploration, and the

¹⁴⁰ For more on ironless boat construction in the Philippines see, Scott, *Boat Building and Seamanship*; Manguin, "The Southeast Asian Ship: An Historical Approach."

¹⁴¹ The excavation of the *San Diego*, a galleon which was built in the Philippines and sank in 1600, has yielded many iron nails and other metal structural components. Jean-Paul Desroches, Gabriel Casal, and Franck Goddio, *Treasures of the San Diego* (Manila: National Museum of the Philippines, 1996).

¹⁴² de Morga, *Sucesos de las Islas Filipinas*, 252 – 253.

quick raiding style warfare that dominated the region.¹⁴³ Considering then the superior performance of local vessels and the many failings of their own ships, Spaniards and Portuguese were quick to adopt local vessels for a wide range of purposes. When in 1528 the Spaniard Andrés de Urdeneta sailed from Tidore to intercept the newly arriving *Florida* from New Spain, he did so aboard a fleet of locally built oared vessels, manned by Tidoran oarsmen.¹⁴⁴ When the Portuguese attempted to drive Miguel López de Legazpi from the island of Cebu in 1567, they made the voyage from Ternate aboard a small fleet of *caracoas*.¹⁴⁵ Legazpi, in turn, used “Filipino-built and Filipino-manned vessels for exploring the Visayas, and sent Martín de Goiti to Luzon with fifteen of them in 1570.”¹⁴⁶ Indeed, the conquest of Manila—a pivotal moment in the early history of the colony—was completed largely with local vessels rather than European sailing ships. With Manila subjugated in 1571 - 1572, Spaniards continued to use local vessels for their many missions to Borneo, Sulu, Mindanao, the Visayas, as well as to mainland Southeast Asia. Local vessels were most intensively used during the *Moro* Wars with southern Mindanao through the first half of the seventeenth century. In fact, trans-Pacific navigation was the only arena in which local vessels were not used. But as we will see below, Spain’s “Manila Galleons” were built, maintained, piloted, and manned by *Indio* laborers and seafarers using local building materials and local manpower. The overall design of the galleon changed little, if not at all, once construction on Spain’s fleet began in Asia. Regardless, very little was “Spanish” about these most famous “Spanish galleons.” The design of the galleon itself was developed out

¹⁴³ The earliest brigantines used by Europeans developed from a Mediterranean shipbuilding tradition and utilized a combination of lateen-rigged sails and oars. By the late sixteenth century, “brigantine” was used to refer to small sailing vessels with a square-rigged foremast and a gaff-rigged (rather than a lateen-rigged) mainmast.

¹⁴⁴ Ione Stuessy Wright, *Voyages of Álvaro de Saavedra Ceron, 1527 – 1529* (Coral Gables: University of Miami Press, 1951).

¹⁴⁵ Scott, *Boat Building and Seamanship*, 10.

¹⁴⁶ Scott, *Boat Building and Seamanship*, 10.

of a larger north Atlantic and western Mediterranean shipbuilding tradition, to which no single port or kingdom could claim ownership. And once production of Spain's Pacific fleet was relocated to Manila, the "Spanish Galleons" became just as much a product of Asia as they were of Europe, if not more so.

In addition to local vessels, much can be said of the skill of local seamen in Southeast Asia as well. Negotiating the shallow waters, reefs, strong currents, and narrow channels of the Philippines in particular was perhaps the most difficult task any European navigator faced. Indeed, in most every instance that a Spanish galleon was wrecked or lost the incident occurred not in the immense Pacific, but amongst the Philippines themselves, just days or even hours from the safety and shelter of Manila Bay. *Indio* seafarers were utilized by Spanish merchantmen aboard the Manila-Acapulco galleons as navigators, pilots, and guides specifically for negotiating the treacherous passage into and out of the Philippines. Spain's trans-Pacific galleons sailed through the dangerous San Bernardino Strait, a narrow channel responsible for countless shipwrecks. Spanish vessels negotiating this treacherous passage were in most every case piloted by an *Indio*. "Such pilots were sometimes rewarded with princely sums like one or two hundred pesos, contributed on the spot by grateful passengers," notes the historian William Henry Scott.¹⁴⁷ And it was not just a lone *Indio* pilot guiding Spain's Pacific galleons—taking a large, slow, overloaded, and unresponsive galleon into and out of the Philippines required the assistance of dozens of local vessels acting as tugs and scores of *Indios* at sea and on shore acting as guides and spotters.¹⁴⁸ As we will see in Chapters 2 and 3, many early Spanish expeditions to the archipelago were ruined because Spaniards lacked the knowledge required to safely navigate the winds and currents amongst the Philippines. Magellan's *Trinidad* became stranded in the

¹⁴⁷ Scott, *Boat Building and Seamanship*, 19.

¹⁴⁸ Scott, *Boat Building and Seamanship*, 19.

Philippines after her crew failed to find proper winds for a return across the Pacific in 1521. Shortly thereafter Saavedra twice failed to get the *Florida* out of Southeast Asian waters and back to New Spain, ultimately stranding his crew on the far side of the globe. Similarly, the failure of both the Loaísa and Villalobos expeditions stemmed from an inability to navigate the steady contrary winds that blow along the Pacific coast of Mindanao. The stakes involved in negotiating the winds and currents of the Philippines only became greater following the establishment of the trans-Pacific trade, by which time vessels departing and arriving from Manila measured up to 2,000 tons and carried cargos upon which the entire economy of the Spanish Philippines depended. The Manila galleons were the lifeblood of the Spanish Philippines and their safety was entrusted to *Indio* seafarers time and time again.

The Importance of Asian Labor

The *Indios* of the Philippines filled a number of roles, including that of cheap, readily accessible labor as well as brokers of knowledge, such as when it came to piloting vessels or selecting ideal timber for ship construction. This study argues that shipbuilding demanded a tremendous number of indigenous laborers in the colonial Philippines and constituted the most grueling and frequent labor obligation forced upon Spain's subjects in the archipelago. In most cases this labor was unskilled and required little in the way of expertise or specialized knowledge. There were instances however, such as when *Indios* were employed as master shipwrights or galleon pilots, when knowledge and skill were required and highly valued by the Spanish.¹⁴⁹ To be sure, the

¹⁴⁹ Gaspar Molina stands as perhaps the most famous example of an *Indio* demonstrating exceptional skill in the service of Spain's Pacific empire. Molina was hired as a master

production of many of the local vessels of the Philippines and greater Southeast Asia required tremendous experience with Southeast Asian shipbuilding traditions. Skilled shipbuilders were highly valued assets that would prove invaluable to the Spanish looking to construct and maintain their own Pacific fleet out of Manila Bay. Considering the substantial technical knowledge and ability that is required to construct a *caracora* capable of transporting hundreds of people at up to 12 knots, it is then “small wonder,” writes Scott, “that Filipino shipwrights could handedly lay out and construct a 30-meters in circumference Manila galleon with no more Spanish assistance than a few soldiers to keep them working without pay.”¹⁵⁰

It did not take colonial administrators long to organize local shipbuilding communities into highly productive shipyards. During the brief tenure of governor Juan de Silva (1609-1616), when shipbuilding was particularly accelerated due to Spain’s maritime war with the Dutch, Captain Sebastián de Pineda recorded the completion of the galleons *Espiritu Santo* and *San Miguel* at Cavite, the *San Felipe* and the *Santiago* on the island of Albay, the *San Marcos* on Marinduque, the *San Carlos* and the *San Jose* in Pangasinan, the *Salvador* in Masbate, and the *San Juan Bautista* in Mindoro.¹⁵¹ These were not small vessels. The *Salvador* had a keel beam 60 *codos* long (roughly 82 feet), the *Espiritu Santo*, *San Filipe*, *Santiago* and *San Juan Bautista* each measured 50 *codos* on the keel (or 68.5 feet).¹⁵² There can be no question that such output required a tremendous amount of labor.

Philippine shipbuilding labor under Spanish rule was concentrated at Cavite, but in a number of other shipyards as well. Shipbuilders were organized under the *polo y servicios*

shipbuilder by Jesuits in New Spain in the eighteenth century. His story is explored further in Chapter 4.

¹⁵⁰ Scott, *Boat Building and Seamanship*, 13.

¹⁵¹ de Pineda, “Philippine Ships and Shipbuilding,” 26 May, 1619, Blair and Robertson, 18: 173-174.

¹⁵² Francois Cardarelli, *Scientific Unit Conversion* (New York: Pringer-Verlag, 1998).

system, which, despite efforts to curb abuses, was akin to the *repartimiento* system in Mexico or the *mita* of Peru.¹⁵³ Every *Indio* of working age, excepting the *datu* of each *barangay* became obliged under Spanish rule to contribute labor for a fixed amount of time each year.¹⁵⁴ The Spanish Crown always preferred that the colonial government of Manila hire Chinese and Japanese laborers and fairly compensate them for their services rather than burden their Christian *Indio* subjects. However, too many laborers were required in shipyards and woodcutting gangs to rely only on Chinese and Japanese hired labor alone. *Indios* were thus enlisted into the *polo* system in a wide range of capacities, including as crewmen on galleons, as domestic servants, or, as was more often the case, put to work in the shipyards. A great number of *Indio* laborers were dispatched into the interior as woodcutters as well, where they were made to gather timber for the construction of galleons. The felling of timber was arduous and grueling work. Despite repeated decrees from Spain to curb abuses of *Indio* laborers, many died or fled service due to

¹⁵³ Phelan, *The Hispanization of the Philippines*, 99. The exact nature of these labor systems have been exhaustively studied by historians, although most attention has been given to labor in the Americas with the Philippines remaining more or less understudied. For recent works that have sought to re-examine or adjust our view of Spanish colonial labor, see Jeremy Baskes, “Coerced or Voluntary? The Repartimiento and Market Participation of Peasants in Late Colonial Oaxaca,” *Journal of Latin American Studies* 28 (1996): 1 – 28; Baskes, “Colonial Institutions and Cross-Cultural Trade: Repartimiento Credit and Indigenous Production of Cochineal in Eighteenth-Century Oaxaca, Mexico,” *Journal of Economic History* 65 (2005): 186 – 210; Roth, “Casas de Reservas”; Pearson, “The Spanish ‘Impact’ on the Philippines.”

¹⁵⁴ In theory, the *polo y servicios* was intended to be far less burdensome than outright *repartimiento* labor, which was often unregulated and unpaid. A royal decree of 1609 issued from Philip III stated that, “We order that, in the Filipinas Islands, no Indians be distributed in *repartimiento*, in any number, for private or public means or gain; since for the cutting of wood, navigation of *caracoas*, and other works of this sort, in which our royal treasury is interested, and for the public convenience, the Chinese and Japanese found on any desired occasion in the city of Manila must be hired; and, as is understood, there will be a sufficient number of workmen among them, who will engage in these services for the just price of their toil. From them shall be employed those who wish to hire themselves out, in order to avoid the concourse of Indians.” From here the decree goes on to state that *Indios* may only be forced into labor when extreme situations deem it necessary to do so, and then only with fair pay. Philip III, “Decree Regulating Services of Filipinos,” 26 May, 1609, Blair and Robertson, 17: 79 – 81;

harsh treatment, low pay, hunger, and so on. The gangs of woodcutters (*cagayan*) numbered well into the thousands, sometimes reaching 8,000.¹⁵⁵ Conscripted from the more densely populated lowlands, *Indio* woodcutters were forced to march far into the interior where suitable timber was located, meaning workers spent many months away from home laboring in an unfamiliar climate. Such labor was necessary for the construction of Spain's large Pacific galleons. Making the many smaller vessels of local design was a much more manageable project for *Indio* laborers. In one famous example, the masts for a single galleon being constructed at Cavite required 6,000 *Indio* laborers to work for three months just to fell the selected trees and transport the lumber to the shipyard.¹⁵⁶ The poor working conditions were aggravated by the meager ration of four pesos of rice due to each laborer each month, which was in many cases never issued.¹⁵⁷ Conscription into a woodcutting gang was often seen as a death sentence for *Indios*. Even as late as 1782 a report made by a former *Oidor* of the Manila *audencia*, Ciriaco Gonzalez Carvajal, admitted that despite numerous royal decrees forbidding abusive labor practices, specifically when it came to shipbuilding, *Indio* laborers still suffered tremendously.

The cutting of wood is the most difficult and arduous of labors because they work from four in the morning to eight at night. They are not given time to eat and rest, are poorly fed, exposed to the sun and wind in unpleasant, harsh and mountainous areas without any comforts, defenses or shelter for the few hours they are allowed to sleep. They must pay for the threshing of their rice and for the water buffalo which bring it to them, and, then, if they do not fall ill and are fortunate enough to complete the thirty days of work which is require of them, they end up with a salary of only thirteen reals, and for the water buffalo some of them must provide to haul the wood, they are only paid seven reals,

¹⁵⁵ Mercene, 2.

¹⁵⁶ Hernando de los Ríos Coronel, "Memorial," 1621, Blair and Robertson, 19: 203.

¹⁵⁷ Phelan, *The Hispanization of the Philippines*, 99.

which is only a *quartilla* a day, despite the regulation that they are to receive one-half a real a day.¹⁵⁸

As we will see, it was not just in Spanish reports, but in the actions of *indio* communities themselves that we can see evidence of the harsh working conditions and the unwillingness to work felling timber. Numerous native revolts sprang up throughout Luzon and the Visayas in the late sixteenth and early seventeenth century in direct response to shipbuilding labor demands.

Underpaying and overworking the *Indios* yielded tremendous benefits for the Spanish who could now construct ships in the Philippines at a fraction of the cost that would otherwise be paid in Europe or the Americas. Alonso Sanchez's 1589 report to King Philip II revealed that *Indio* woodcutters and shipyard laborers received only four *reals* a month, when "at least forty *reals* a month were needed to keep body and soul together."¹⁵⁹ And in 1619, Sebastáin de Pineda reported that the common *Indio* woodcutters still only received seven to eight *reals* a month while those *Indios* of greater skill who took part in the design and construction of vessels earned a meager twelve *reals* per month.¹⁶⁰ Generally speaking, minimum wage for unskilled forced labor in the Philippines was set at a meager three centavos in the early 1600s, and rice rations were included only sporadically.¹⁶¹ To provide context, note that Spanish carpenters working in shipyards on Spain's northern coast in the early seventeenth century earned around 135 *reals* per month. In Seville the price for a single carpenter ran to eight *reals* per day.¹⁶² And in New Spain, the cost of labor, including carpentry and shipbuilding, was roughly double that in Spain.¹⁶³

¹⁵⁸ Roth, 116. Roth takes this quotation from "A report on the general condition of the Islas Filipinas," 20 April 1586, in Licuanan and Llavadro, vol. 4, 360. See also, "Letter of Doctor Santiago de Vera," 26 June 1586, in Licuanan and Llavadro, vol. 4, 391.

¹⁵⁹ Cushner, *Spain in the Philippines*, 120.

¹⁶⁰ De Pineda, "Philippine Ships and Shipbuilding," 26 May, 1619, Blair and Robertson, 18: 174.

¹⁶¹ Scott, *Boat Building and Seamanship*, 17 – 18.

¹⁶² Phillips, 78.

¹⁶³ Phillips, 79.

Thus, while *Indios* suffered greatly under the *polo* system, their skill and hard labor made the Philippines the cheapest place within Spain's vast empire to build vessels. As Chapters 2 and 3 will show in greater detail, costs related to shipbuilding in both Europe and New Spain had become excessive by the mid sixteenth century and prohibited the creation of a trans-Pacific link for many decades. It was not by chance that the majority of the Manila galleons were built in Manila.

Chapter 4 will offer many examples of typical construction costs and the savings that were to be had in the Philippines through the exploitation of indigenous laborers. If it were not for the supply of abundant and cheap *Indio* labor, which was supplemented by a handful of highly skilled *Indio* craftsmen in the shipyards, the Spanish Philippines would have failed to establish itself on account of a lack of affordable manpower, which could not be readily secured elsewhere in Spain's empire. Without a locally available labor pool in the Philippines, supplying the distant Philippines with enough vessels to defend the colony while at the same time sustaining trans-Pacific trade would have meant securing vessels from New Spain, which would have cost the crown dearly, and would have more than likely made the venture a financial and logistical impossibility. As Chapter 3 will demonstrate, the Pacific harbors of New Spain were without the needed manpower and material resources to supplement Spain's efforts at Pacific voyaging and the cost of producing even the smallest and flimsiest of vessels cost many times more than shipbuilding anywhere else in Spain's empire. That the Philippines possessed abundant and skilled shipyard labor, particularly in and around the Manila Bay region, goes a long way in explaining Spain's success in the Pacific. At the same time, we cannot ignore the fact that such labor practices as were introduced in the Spanish Philippines—especially those labor institutions associated with shipyard production—wrought profound social

transformations, including open rebellions, the relocation of entire communities, increased mortality, and the disruption of local economies. This study argues that shipbuilding constituted a profound force for socio-economic change in the Philippines—perhaps the greatest force for change prior to the introduction of plantation agriculture.¹⁶⁴

The Environment of the Philippines: Timber, Hemp, and Rice

The environment of Manila Bay and the surrounding provinces offered numerous natural resources needed by the Spanish, many of which were particularly vital in sustaining Spain's colonial presence in the region and in building up and maintaining the trans-Pacific trade with the New World. With the Philippines lacking in precious metals or spices in any significant quantities, Spaniards eventually came to hone in on timber as the most valued and useful natural resource of the archipelago. Timber was vital for the construction and maintenance of not only the many local vessels that Spanish colonial officials requisitioned for the purposes of regional commerce and military defense, but also for the construction of large trans-oceanic galleons. Many varieties of timber indigenous to the Philippines were found to be of great use in the construction of Spain's Pacific galleon fleet. Many of the types of timber already used by local communities in ship construction were found to possess a level of strength and durability that was far superior to all European varieties of timber, including oak and pine. The forests of the Philippines also provided a number of sources of fiber for the manufacture of rope and cordage. *Abacá*, or "Manila hemp" as it is commonly called, was used by local shipbuilders for the manufacture of rope and was quickly adopted by Spanish colonial officials as an alternative to

¹⁶⁴ For a thorough analysis of the widespread social changes that took place in the Philippines following the development of a modern plantation economy, see McCoy and de Jesus.

European or New World cordage, which was costly to import and often of questionable quality.¹⁶⁵ Rope was a valuable and necessary component in ship construction. The need for rope, which deteriorated rather easily during the course of a Pacific voyage, was prevalent from the outset of Spain's presence in the Philippines. One of the first official requests for men and materials to be sent to the Philippines from New Spain in 1568 lists first—above even food, weaponry, and craftsmen—“30 *quintales* of cordage.”¹⁶⁶

The importance of Philippine timber to Spanish colonial officials is made evident by the numerous government reports from Manila in the late 1500s and early 1600s that describe in great detail the numerous varieties of timber available for ship construction and the ideal application of each variety. In 1619, for example, Sebastián de Pineda composed a lengthy report in which he identified and detailed the specific uses for timbers like *maría* (or *palo maría*), *arguijo* (or *guijo*), *laguan*, *banabá*, *maria de monteguas*, and *dongon* (or variously *dúgol* or *dungon*).¹⁶⁷ All of these were foreign species to the Spanish but were found to be well suited to the production of ocean-going vessels. The construction and maintenance of Spain's vessels was the most vital industry in keeping Spain's colonial endeavors alive in Southeast Asia. The Pacific crossing was long and punishing and often wore ships down to the point of being unseaworthy. As such, Spaniards in the Philippines oversaw an unending process of ship construction and repair to keep the Manila-Acapulco galleon trade operational and the Philippines connected to

¹⁶⁵ *Abacá* was a valued natural resource of the Philippines well into the twentieth century, primarily for its application in rope-making. See, Norman G. Owen, “Abaca in Kabikolan: Prosperity without Progress,” in McCoy and de Jesus eds., *Philippine Social History*, 191 – 216. Miguel Lopez de Legazpi, after receiving a shipment of rope from Vera Cruz, complained of its inferior quality. “Letter of Miguel Lopez de Legazpi,” 11 August 1572, in Licuanan and Llavadro, vol. 2, 365-366.

¹⁶⁶ “A list of what should be sent from Nueva España to Las Islas Filipinas through Juan de las Ysla,” in Licuanan and Llavadro, 2: 295.

¹⁶⁷ de Pineda, “Philippine Ships and Shipbuilding,” 26 May, 1619, Blair and Robertson, 18.

the emerging global economy. Aside from the large Pacific galleons, Spaniards were also in great need of smaller, lighter, more nimble craft for local defense and commerce. Again, native timber and labor proved vital in building the vessels that kept needed shipments of rice moving into and out of Manila as well as the vessels that beat back Portuguese, Chinese, Japanese, *Moro*, Dutch, and English attackers.

Many indigenous communities in the Philippines had been using these species of timber, and dozens of others, in shipbuilding for centuries. *Indio* shipbuilders, Spaniards soon learned, had an expansive and intimate knowledge of the forests of Luzon. In his wide ranging history of the Philippines, Antonio de Morga noted the many varieties of timber he observed and their various uses to which he saw them applied.

There are...many stout, straight trees which are also light and pliant and can be used for making mats for ships or galleons. Thus any sort of vessel may be fitted with a mast made from a single trunk from one of these trees, without there being any need for splicing or fishing; to make them up from different pieces. For the hulls of ships, for keels, futtock- and top-timbers, and any other kinds of futtocks, breasthooks, *puercas*, transoms, *llaves*, and rudders, all sorts of good timber can be found easily. There is also good planking of quite suitable timber for the sides, decks, and upper works.¹⁶⁸

These excellent hardwoods combined with the skilled craftsmanship of the natives yielded galleons of unparalleled strength and durability. Spanish ships constructed in Europe were made largely of oak and pine, woods well suited for maritime applications, but not as durable as *molave* or *lanang*.¹⁶⁹ Another Philippine timber, *laguan*, proved decisive in the battle against shipworm infestation. *Laguan* was far more resistant to shipworms than anything available in Europe and was used in the construction of nearly every galleon produced in the Philippines.¹⁷⁰ There was also *maria*, which the *Indios* introduced to the Spaniards. *Maria* was reportedly so

¹⁶⁸ Morga, *Sucesos*, 253-254.

¹⁶⁹ Phillips, 79-80. These timber species will be explored in greater detail in Chapter 4.

¹⁷⁰ de Pineda, "Philippine Ships and Shipbuilding," 26 May, 1619, Blair and Robertson, 18.

strong that “once a nail is hammered into it, it is impossible to withdraw it without breaking it.”¹⁷¹ Teak, when available, was used as the frame of the galleons, “the ribs and knees, the keel and rudder, and inside work” was fabricated from Philippine *molave*. The planking outside the ribs were of the highly durable *lanang*, “a wood of great toughness, but of such peculiar nature that small cannon balls remained embedded in it, while larger shot rebounded from the hull made of this timber.”¹⁷² The masts of a sail ship were no doubt the most crucial unit in ship construction, having to be of a single piece of timber of great strength. By the seventeenth century, the Iberian Peninsula was already running short on trees suitable for masts, forcing Spain and Portugal to import costly Prussian pine.¹⁷³ But in the Philippines the Spanish had a fresh supply of mast timber, many varieties of which grew straight and tall enough to form mainmasts of up to seventy-two *codos* long (nearly 100 feet).¹⁷⁴

Aside from those environmental resources necessary for shipbuilding and the maintenance of maritime trade links one must also consider those resources that kept Spaniards from starving. Securing reliable sources of food in Southeast Asia had been the single greatest obstacle in preventing early success for Spain’s men of the sea. As will be shown below, the voyages of Villalobos and Loáisía in particular were both ruined through starvation and an inability to regularly obtain needed sustenance from the peoples of Mindanao and the Visayas. Many of the communities in these regions practiced subsistence agriculture and were wholly unable to support an additional two or three hundred men. Manila Bay was ultimately found to be one of the few sites amongst the Philippines that generated enough agricultural surplus to feed

¹⁷¹ de Pineda, “Philippine Ships and Shipbuilding,” 26 May, 1619, Blair and Robertson, 18: 172.

¹⁷² de Pineda, “Philippine Ships and Shipbuilding,” 26 May, 1619, Blair and Robertson, 18: 173 – 174.

¹⁷³ Phillips, 80.

¹⁷⁴ de Pineda, “Philippine Ships and Shipbuilding,” 26 May, 1619, Blair and Robertson, 18: 171.

hundreds of starving Spaniards and to sustain a growing colonial base. The landscape of the Manila Bay region afforded many advantages to Spaniards struggling to establish a colony, paramount of which was the fertile rice-growing province of Pampanga.¹⁷⁵ It would be difficult to exaggerate the importance of Pampanga's fertile lands and the province's central role as Manila's primary breadbasket (or rice basket). Numerous Spanish sources from the sixteenth and seventeenth centuries praise the agricultural productivity of the land and peoples of Pampanga, which in many years produced multiple rice crops for the city of Manila.

The health and wellbeing of Spanish Manila rested almost entirely upon the rice-producing region of Pampanga, a fertile province stretching north from Manila Bay along the Pampanga River basin, which itself runs north-south just to the east of the Zambales Mountains and up towards the Agno River and the Lingayen Gulf. This single province was in every respect the rice basket of Spanish Manila from the very outset.¹⁷⁶ Indeed, it was the agricultural output of Pampanga that attracted Legazpi's men to the region in the first place. In addition to the fertile land of this province, the Pampanga River proved an ideal transportation route for bulk shipments of rice into Manila. Local cargo ships were filled with freshly harvested rice, often twice a year, and floated down river into Manila Bay where it was then brought into the city.¹⁷⁷ Growing food was a duty shared by other provinces. "The Ilocos region to the north," writes historian John A. Larkin, "while as fertile as Pampanga, could only send food to Manila when the prevailing winds were adequate for sailing down the west coast of Luzon."¹⁷⁸ Therefore,

¹⁷⁵ Larkin, *The Pampangans*.

¹⁷⁶ For example, see Juan de Medina, "Historia de la Orden ds S. Agustín de Estas Islas Filipinas," 1630, Blair and Robertson 23:244 – 245; Rodrigo Díaz Guiral, "Letter to King Philip III," Manila, July, 1606, Blair and Robertson, 14: 157 – 158.

¹⁷⁷ Larkin, *The Pampangans*, 23 – 28.

¹⁷⁸ Larkin, *The Pampangans*, 25.

Pampanga became Manila's year-round food source and Spain's colonial presence within Manila Bay was further concentrated.

The importance of Pampanga to the wellbeing of Manila was evident from the first years after the city's founding. Governor Francisco de Sande, writing in 1576, just five years after Legazpi founded Manila, wrote that, "the province which in all this island of Luzon produces the most grain is called Pampanga...if the rice harvest should fail there, there would be no place where it could be obtained."¹⁷⁹ Moreover, the Spaniards gained not only rice from Pampanga, but a large population of loyal taxable subjects. Larkin's history of the province of Pampanga argues that its inhabitants constituted one of Spain's most dependable and loyal subject bases. While rice was collected annually through the *vandala* system of taxation, labor was conscripted, like elsewhere in the Philippines, primarily through the *polo y servicios*. Pampangans labored as shipbuilders, carpenters, miners and many other occupations besides. But as Larkin rightly argues, Spaniards were quick to recognize the importance of the rice harvest and therefore taxed and worked the Pampangans a great deal less than other *Indio* communities.¹⁸⁰ The only occasion in which the natives of Pampanga rose up against Spanish rule came in 1660 regarding protests of overly harsh labor conditions on woodcutting gangs. Not wishing the uprising to spread and interrupt the harvest of rice, Spaniards moved to quickly stabilize the situation.

Conclusion: Europeans in an Asian World?

Spaniards in the Philippines found themselves wholly dependent upon the local population and environment for their survival. As the next two chapters will illustrate, of the many expeditions

¹⁷⁹ Francisco de Sande, "Official Report," Blair and Robertson, 10: 307 – 309.

¹⁸⁰ Larkin, *The Pampangans*, 26 – 27.

that came to the archipelago before Legazpi's 1564 voyage, all clearly demonstrated that a small number of Spanish settlers had no means to secure their own food or build their own colonial edifices; nor did they have the means to establish and operate a shipyard once in the Philippines and organize a return voyage home. However, meeting all of these objectives was necessary if Spain hoped to make regular trans-Pacific navigation possible. Therefore, Spaniards were forced out of necessity to rely upon a systematic exploitation of the indigenous population in order to carry out so many of the tasks vital to the wellbeing of the colony and the galleon trade. While Chinese and Japanese laborers were sporadically used, the Spanish colonial order overwhelmingly relied upon its *Indio* subjects to complete the most labor-intensive projects. At the same time, the natural resources of the Philippine environment were put to use by natives and Spaniards alike. As it was, the exploitation of human and material resources on the scale needed to sustain a colony was initially only possible in the densely populated Manila Bay region of Luzon.

This strategy of exploiting key harbors and their populations and natural resources was readily and enthusiastically pursued by the Portuguese in the Indian Ocean basin, from East Africa to Malacca. Spaniards however were slow to adopt such dependent relationships in Southeast Asia and initially diverted all of their meager resources to a wholesale conquest of the highly coveted but largely underdeveloped and sparsely populated Spice Islands. Even if the Spanish managed to beat the Portuguese to the Spice Islands, they would not have gained any of the necessary resources to sustain a viable colony. As it stood in the early sixteenth century the resources Spain's men of the sea could muster in Southeast Asia were quite meager. As the next two chapters will demonstrate, after rounding the Americas and crossing the vast *Mar del Sur*, most of the expeditionary resources Spain dispatched to the Far East had wasted away by the

time of their arrival in the East. While crewmen succumbed to starvation and sickness, their vessels were worn down by storms and shipworms. Spain's inability to first find a foothold in a well-established and well-supplied harbor in Asia goes a long way towards explaining why the Spices Islands, and so many other strategic points in South and Southeast Asia, fell under Portuguese control. The Portuguese had adopted a strategy of relying upon indigenous knowledge, manpower, and material resources from their very first arrival in India which enabled them to extend their presence quickly and effectively. More importantly, the Portuguese had the resources to execute such a strategy, having only the African Cape to negotiate. Meanwhile, Spanish influence in Asia did not materialize until after 1571 and the founding of Manila, by which time their Iberian rivals had decades of experience operating within the constraints of locally available resources and had wrested control of the Spice Islands and Straits of Malacca for themselves.

While many histories of the colonial Philippines acknowledge these facts, few studies examine the degree to which the Spanish colony in Philippines was dependent upon local labor and resources for its very survival and how this relationship carried over to the operation of the Manila galleons. Moreover, few historians take notice of the fact that the extending of Spain's and Portugal's empires into distant lands was a complex process dictated, more than anything else, by the regional Asian economic landscape and by the availability of Asian manpower, skill, and materials. It should be obvious that the Philippines were far removed from the rest of Spain's empire. The only link keeping the Philippines "Spanish" was its link to the Viceroyalty of New Spain, which, as Chapter 3 will demonstrate, was itself incapable of initiating trans-Pacific commerce.¹⁸¹ One should take it as no coincidence that Spain at long last managed a series of

¹⁸¹ Bjork.

successful round trips across the Pacific only *after* seizing Manila. It was in Manila that Spaniards found all the needed resources for shipbuilding and repair, and at far lower costs and in significantly greater quantity and quality than in New Spain. Indeed, with Manila subjugated Spaniards were able to secure food supplies from the region and to coerce the indigenous population into labor systems specifically tailored to the maintenance, construction, and operation of “Spain’s” Pacific fleet.

CHAPTER 2

By Way of Spain: The Limits of Iberian Seafaring in the Early Sixteenth Century

And if our Lord and Virgin Mother had not aided us by giving good weather to refresh ourselves with provisions and other things we had died in this very great sea. And I believe that nevermore will any man undertake to make such a voyage.¹⁸²

Antonio Pigafetta, c. 1524

Before we examine the development of the Manila galleon trade in the Philippines, we must first establish why the galleon trade was not forged from either Spain or New Spain. This chapter will move back in time to the first attempts the Kingdom of Castile made at reaching Southeast Asia. Here we will focus on the many hardships and challenges that ultimately made a direct connection between Seville and Asia impossible in the sixteenth century, thus necessitating the move to Acapulco, and later Manila.

The hardships experienced during the first circumnavigation of 1519 – 1522 were extraordinary and foreshadowed the coming failures of a series of would-be Pacific expeditions. Of an original fleet of five ships and a complement of roughly 275 men, only one ship and

¹⁸² Antonio Pigafetta, *Magellan's Voyage: A Narrative Account of the First Circumnavigation*, translated by R. A. Skelton (New York: Dover Publications, 1994), 57. Various manuscript versions of Pigafetta's account are extant in numerous languages from the 1520s, the most famous of which Skelton analyzes in his introduction.

eighteen original crewmen from Ferdinand Magellan's expedition survived to return to Spain.¹⁸³ During the Atlantic crossing, before even reaching the straits that now bear his name, Magellan had to quell no fewer the three mutinies that threatened to end his command and prematurely end the voyage. By the time he had entered the vast *Mar del Sur* Magellan had already lost two vessels, one to shipwreck along the treacherous Atlantic coast of South America and the other—the fleet's largest and best supplied ship—simply turned back without warning, her crew unwilling to go any further. Those who did remain with Magellan for the Pacific crossing experienced tremendous suffering through starvation, dehydration, and malnutrition. Nineteen men died during the three-and-a-half month crossing and an additional thirty men were suffering so greatly that they were unfit for work upon arriving in Southeast Asian waters. Following Magellan's tragic demise at Mactan in April of 1521 there were so few crewmen left alive that the *Concepción* was stripped of any useful components and abandoned as there were simply not enough hands to sail her.¹⁸⁴ At this point, the remaining two vessels from the fleet—the *Victoria* and *Trinidad*—were almost wholly unseaworthy after going more than a year and a half without significant repair. Making matters worse, the crew found themselves in unfamiliar waters, without a friendly harbor. Considering this situation, it is little wonder that Pigafetta would ascribe his survival to divine intervention. However, an examination of the available source

¹⁸³ Another thirteen survivors of Magellan's crew later arrived at Spain from Southeast Asia aboard Portuguese ships.

¹⁸⁴ Martin J. Noone, *The Islands Saw It: The Discovery and Conquest of the Philippines, 1521 – 1581* (Dublin: Helicon Press, 1980), 87. One can only estimate the number of crewmen alive following the Pacific and the loss of those crewmen (Magellan included) while at Cebu. Noone proposes 120 surviving crewmen after 60 fled with the *San Antinio*, 35 having been killed at Cebu and Mactan, and 40 dying from scurvy and sickness. Antonio Pigafetta, *Magellan's Voyage Around the World*, vol. II, trans. James Alexander Robertson (Cleveland: Arthur H. Clark, 1906), 13. "at a distance of eighteen leguas from that island of Zzubu, at the head of the other island called Bohol, we burned the ship 'Conceptione,' for too few men of us were left [to work it]."

material reveals that the *Victoria* was restored to seaworthiness and her crew brought back to health not through any heavenly interference, but rather through a conscious effort on the part of the surviving crew to extract aid and vital material supplies from the local peoples and environments they encountered in Southeast Asia. Guiding Magellan's surviving crew to safe harbor and repairing the leaking hulls of both ships was hardly a difficult task for the native peoples of the Spice Islands. Such an act foreshadowed a profound turning point and the emergence of a greater system of dependency to come later in the century, wherein Asian labor and materials were made to support Spanish vessels and crewmen.

To make up for their lack of navigational and geographic knowledge the roughly 100 surviving crewmen of Magellan's voyage took to either hiring or forcibly capturing local pilots and seamen to guide their way. It is an often overlooked fact in most historical narratives that the first circumnavigation of the globe was not a purely European accomplishment. Not only did the Magellan expedition find its way from the Philippines to the Spice Islands with the aid of native pilots, but the return of the *Victoria* to Seville was only made possible through the aid of thirteen local seamen who were added to the *Victoria's* manifest at Tidore and accompanied the voyage across the Indian Ocean. Aside from navigators, food was also of immediate concern. Magellan's surviving crew bartered for fresh water and food where they could, but they often fell back to ransoming hostages for their supplies. One such notable case came after the *Victoria* and *Trinidad* departed Boreno. *Tuan* Mahamud, a sultan of Pualawan, was captured and ransomed by the starving Spanish crewmen not for gold or spices but rather for "four hundred *cabans* of rice, twenty goats, twenty pigs, and fifty chickens."¹⁸⁵

¹⁸⁵ Noone, 91.

Thus it was only through banditry and an overt dependency upon local peoples and resources that Magellan's crew finally weighed anchor at Tidore in November of 1521. Before a return voyage could even be attempted however, both the *Victoria* and *Trinidad* required extensive overhauls. When stopped at Borneo Spaniards inquired as to what local materials could be used to repair their ships. The crew desperately went about collecting indigenous timbers, fibers, and caulking mixtures and made a number of temporary repairs that did little to extend the life of their vessels. However, months later in the Spice Islands the surviving members of Magellan's crew found their salvation through an alliance with the natives of the island Tidore, who were themselves desperate for aid in their struggle against the newly arrived Portuguese at Ternate. The Tidorans offered the Spanish not only badly needed food but also the building supplies and laborers required to conduct more extensive repairs to both their vessels. The *Victoria* and *Trinidad* were refitted with new hull planking and cordage by local laborers. Ultimately, the *Victoria* succeeded in reaching Seville, but only barely. Just eighteen original crewmen were left alive upon reaching Spain. The *Trinidad* fared much worse. After the extensive repairs conducted at *Tidore* the vessel was still rather fragile and was unable to find favorable winds for a last desperate run back across the Pacific to Darién. With no other option but to turn back to Southeast Asia, the *Trinidad's* crew were stranded on the far side of the earth.

Magellan's voyage is but the first example among a series of cases in which Spain's men of the sea struggled tremendously to negotiate a Pacific crossing. The hardships experienced by Magellan's crew and the desperate need to secure food, building materials, and new crewmen once in Asian waters did not abate over time. Indeed, Spain launched a number of voyages that followed in Magellan's wake across the Pacific throughout the early and mid-sixteenth century, yet by 1560 not one had succeeded in returning even a single vessel safely to Spanish territory.



Figure 2. Maritime Southeast Asia

While historians have firmly seized upon the heroic 1519 – 1522 circumnavigation as evidence of Spain’s (and Europe’s) imminent domination of the world’s seas, in actuality Spain’s earliest ventures beyond the Atlantic and into the *Mar del Sur* were marred by failure and demonstrated clearly the limited abilities of sailors and vessels of the era. The return of the *Victoria* to Seville marked, if anything, the beginning of an era of failure—the commencement of a great and prolonged struggle to come to grips with the world’s largest Ocean. This long

struggle only came to an end once Spain's men of the sea found a way to fully tap into Asian maritime resources, thus supplementing their efforts where it was needed most: on the far side of the globe.

This chapter is devoted to an examination of Spain's first attempts at reaching Asia via a direct westward maritime route across the Atlantic and Pacific oceans in the early sixteenth century. Magellan's voyage of 1519 – 1522 was the first of four expeditions launched from Spain in the hopes of securing the Spice Islands for Charles V; following in his wake were the expeditions of García Jofre Loasía (1525), Sebastian Cabot (1526), and Diego Garcia (1527). Of the nineteen vessels that comprised these first four *Armadas de Molucca*, only three vessels completed the Pacific crossing, and only one of these vessels, the *Victoria*, managed to return safely to Spain. While the failure of these voyages effectively ended further attempts at linking the *Casa de Contratación* directly to Asia, one must also recognize that these early voyages foreshadowed policies and strategies that would ultimately lead to success for Spanish mariners and merchants in the Asia-Pacific region.¹⁸⁶ In both Magellan's and Loasía's experiences in Southeast Asia—which were the only two expedition leaders to reach Asia from Spain—we are able to observe a number of prototypical cases of dependency upon both the peoples and environmental resources of Southeast Asia. Food, building materials for ship repair, as well as labor and navigational knowledge were all secured either through coercion or amicable alliances with Southeast Asian peoples. To be sure, these early Spanish voyages into the Pacific were largely failures—no permanent colonial base was established in Southeast Asia and the Portuguese advance into region continued largely unchecked for much of the sixteenth century. Yet within the experiences of these voyages one can see an outline for Spain's future success—

¹⁸⁶ The *Casa de Contratación* (House of Trade) was based in Seville and collected trade duties and issued authorization for voyages of commerce within Spain's empire.

that is the forging of a dependent, exploitative relationship with local peoples and resources of the region.

European Shipbuilding and Asian Influences

Much of Spain's failure in the Pacific during the first half of the sixteenth century, as well as its eventual successes later in the century, can best be understood through an examination of the sailing vessels used—their cost, construction, durability, and longevity. Large galleons like the ones that would eventually sail the waters between Manila and Acapulco in the late sixteenth century did not exist when Magellan set out on his own Pacific voyage in 1519. The large and formidable “Manila Galleon” and Portugal's “East Indiaman” only emerged in the late sixteenth and early seventeenth century after Europeans had come to fully depend upon and participate in Asian trade. In so doing, Europeans had also come to rely upon Asian shipbuilding labor, materials, and seafaring knowledge and traditions. In the earliest days of European trans-Oceanic exploration the largest of European vessels averaged only around 100 tons.¹⁸⁷ In the early sixteenth century, on the eve of Magellan's departure, the vessels available for exploration and long-distance trade were modestly sized *naos* and caravels, often as small as 50 tons. These vessels, in various combinations and styles, had become the primary workhorses of both Portugal's exploits along the African coast and in Spain's early endeavors into the Atlantic in the

¹⁸⁷ For the general state of European shipbuilding in the late fifteenth and early sixteenth century, see Unger, *Cogs, Caravels, and Galleons*; Gay and Ciano, *The Ships of Christopher Columbus*; Phillips.

latter half of the fifteenth century.¹⁸⁸ An examination of the General Register of ships at the General Archive of Simancas has shown that between 1476 and 1496, 47.5% of all large vessels built in Spain and Portugal were listed as caravels and 39.1% were labeled *naos*, few of which measured more than 80 tons.¹⁸⁹

The northern Spanish coastline of the Basque region was at this time beginning to emerge as one of the main centers of innovation in shipbuilding for Western Europe and had begun to produce noticeably larger and more durable ocean-going vessels from the late fifteenth century.¹⁹⁰ Situated between the independent shipbuilding traditions of the Baltic region and the Mediterranean, and with ready access to all the necessary raw materials via the North Sea trade, Basque shipyards became the facilitators of early Portuguese and Spanish expansion into the Atlantic and Indian Oceans, making possible the Age of Exploration.¹⁹¹ Nearly all of Spain's early Pacific endeavors were comprised of vessels built in the Basque region. Following the miraculous return of Magellan's *Victoria*, there was a great boom in ship construction for long-

¹⁸⁸ José Luis Casado Soto, "Los barcos del Atlántico ibérico en el siglo de los descubrimientos: Aproximación a la definición de su perfil tipológico," *Andalucía, América y el mar* (October 1989): 128 – 129.

¹⁸⁹ Soto, "Los barcos del Atlántico Iberico," 128. The style of what one might call a "*nao*" varied a great deal. *Nao* often served as a general term, sometimes simply meaning "ship."

¹⁹⁰ Works that stress the acceleration of innovation in ship designs in Europe around the years 1450 – 1600, particularly the coming together of Northern European and Mediterranean designs, see John F. Guilmartin Jr., *Galleons and Galleys* (London, Cassell & Co., 2002); Richard W. Unger, *The Ship in the Medieval Economy*; Peter Kirsch, *The Galleon: The Great Ships of the Armada Era* (Annapolis, MD: Naval Institute Press, 1990). The northern European shipbuilding tradition, which favored smaller clinker-built hulls and square-rigged configurations, is probably best represented by the stout cog. The Mediterranean, or Southern European shipbuilding tradition, depended upon flush-planked lateen-rigged vessels like the nave. Mediterranean vessels were often larger than those of Northern Europe and incorporated a number of design elements from the Near East and Islamic traditions. The blending of these two styles occurred in Basque shipyards by the late fifteenth century and resulted in a number of new vessel types used in Europe's exploration of the world's seas.

¹⁹¹ Roger C. Smith, *Vanguard of Empire: Ships of Exploration in the Age of Columbus* (New York: Oxford University Press, 1992), v.

distance trade and exploration and Coruña in Northern Spain was the site chosen for the briefly lived House of Spice.¹⁹²

Let us here consider the production of large ocean-going vessels in Iberia—the methods, designs, and materials used in early sixteenth-century shipbuilding. Such considerations will be of great concern when we examine not only how Spain’s shipbuilding industry failed to cope with the challenges of voyaging to Asia, but also when we look to how Spaniards attempted to recreate their shipbuilding tradition in the Pacific basin later in the century. As we will see below, however productive European shipyards were at the time of Spain’s early Pacific endeavors, they were still incapable of producing vessels that could withstand the immense distance that needed to be negotiated in sailing westward to Asia. The next chapter will examine how these failed attempts to reach Asia from Spain inspired the decision to recreate European-style shipyards along the Pacific coast of New Spain—a measure that was to prove similarly futile. Success for Spain’s men of the sea would only come in the latter half of the sixteenth century, when the shipbuilding methods explored in this chapter were taken to Southeast Asia—namely Manila Bay—and were adapted to better suit the climate, available resources, and construction techniques of the local labor force, which was large and was utilized at extremely low costs. For trans-Pacific navigation, large European-style galleons were constructed in Manila using Asian labor, timbers, ropes, sailcloth, and iron, thus generating a hybrid of sorts. For limited-range seafaring, Spaniards in the Philippines adopted smaller vessels wholesale—like the *caracora*—of which nothing could be counted as being “Spanish” or “European.”

¹⁹² The House of Spice was a trading organization intended to act as a sister institution of the *Casa de Contratación*. Following the cessation of direct voyaging from Spain to Asia in 1527, the House of Spice was closed.

What then was the state of Spanish shipbuilding on the eve of Magellan's departure? The northern Basque coast, which hosted abundant supplies of the necessary varieties timber and iron ore, was logistically the best place in Spain, and perhaps all of Europe, to construct sailing vessels.¹⁹³ Any raw materials that were not locally available were easily obtained via overseas trade networks that reached out to England, the Netherlands, and Scandinavia. More importantly, the coast of northern Spain had a wealth of experienced craftsmen who were part of a local shipbuilding tradition that dated back to the early medieval era. In the middle of the sixteenth century the navigator and cartographer Juan Escalante Mendoza cited Basque shipbuilders as the finest and most productive in Europe. To further develop the industry monarchs ensured that Basque shipbuilders enjoyed a number of concessions and subsidies from the Castilian government.¹⁹⁴ By the fifteenth century Bilbao had emerged as the dominant commercial and shipbuilding center of Northern Spain alongside the cities of Fuenterrabía, Pasajes, San Sebastián, Deva, Ondárroa, Lqueitio, Bermeo, Portugalete, Castro Urdiales, Laredo, Santander, and San Vicente de la Barquera.¹⁹⁵ Many contemporary writers lauded the ideal conditions for shipbuilding that existed along the Basque coast. Juan de Escalante de Mendoza, writing in the 1570s, claimed that,

The best masts, the best supplies of wood, nails, pitch, and hemp for the construction of vessels are to be found in Viscaya and the neighboring coasts. In general, they give vessels the best possible model, the most suitable dimensions, and the lowest cost; so that they sail better, with less risk and danger than even the ships and galleons built in Lisbon...¹⁹⁶

¹⁹³ Phillips, 20.

¹⁹⁴ Phillips, 20 – 21.

¹⁹⁵ Soto, “Los barcos del Atlantico Iberico,” 125.

¹⁹⁶ Juan de Escalante Mendoza, quoted in Abbot Payton Usher, “Spanish Ships and Shipbuilding in the Sixteenth and Seventeenth Centuries,” in *Facts and Factors in Economic History* (Cambridge, MA: Harvard University Press, 1932), 192 – 193; Also, see Smith, 51.

These shipyards that Mendoza spoke of were responsible for roughly ninety percent of Spain's heavy ship production by the latter half of the sixteenth century and produced nearly every vessel that Spain dispatched to the Pacific between 1519 and 1527.¹⁹⁷ Indeed, the majority of Spain's expeditions utilized both Basque ships and Basque sailors.¹⁹⁸ Sailing vessels in the early modern era were complex constructions and were amongst the most technologically advanced products Europe was capable of manufacturing. It just so happened to be the case that the Kingdom of Spain had a relatively advanced and highly productive shipbuilding community at its disposal in the Basque provinces.

By 1500 Basque shipbuilders came to develop "full-rigged" vessels, which had a number of specific features making them better suited to voyages of exploration and long-distance trade.¹⁹⁹ The prototypical example of the full-rigged vessel was variously named the carrack in English, the *nau* in Portuguese, and the *nao* in Spanish.²⁰⁰ Such vessels typically had a stout length-to-breadth ratio somewhere in the range of 3:1 to as little as 2:1. The hull was constructed

¹⁹⁷ Wing, 120; José Luis Casado Soto, *Los barcos españoles del siglo XVI y la Gran Armada de 1588* (Madrid: Editorial San Martín, 1988), 7 – 8; Pierre Chaunu, *Seville et l'Atlantique*, vol. 1 (Paris: 1955), 250 – 256.

¹⁹⁸ Marciano R. De Borja and William A. Douglass, *Basques in the Philippines* (Reno: University of Nevada Press, 2005).

¹⁹⁹ Thomas J. Oertling, "Characteristics of Fifteenth- and Sixteenth-Century Iberian Ships," in *The Philosophy of Shipbuilding* edited by Frederick M. Hocker and Cheryl M. Ward (College Station, TX: Texas A&M University Press, 2005), 129 – 136; Filipe Castro, "In Search of Unique Iberian Ship Designs," *Historical Archeology* 42 (2008): 63 – 87; Phillips, 35. Unger, *The Ship in the Medieval Economy*, 203, 216; Fredrick Chapin Lane, *Venetian Ships and Shipbuilders of the Renaissance* (Baltimore: Johns Hopkins University Press, 1934), 40 – 41; Castro, "In Search of Unique Iberian Ship Design Concepts," 72 – 73. More broadly speaking, one can point to the first emergence of a "general European dimension" to shipbuilding in fifteenth century northern Spain as a result of this blending of traditions.

²⁰⁰ Ship designs and types were fluid in the early modern era and are exceedingly difficult to differentiate through the historical record. For more on the distinction between *naos* and other Iberian ship types of the sixteenth century, see Alexander Dean Hazlett, "The Nao of the *Livro Nautico*: Reconstructing a Sixteenth-Century Indiaman from Texts," (Ph.D. dissertation, Texas A&M University, 2007); Harry A. Morton, *As the Wind Commands: Sailors and Sailing Ships in the Pacific* (Middletown, CT: Wesleyan University Press, 1975), 99; Phillips, 39.

using flush planking around a skeletal framework, as in the Mediterranean fashion. The overall shape of the hull was generally broader towards the bow with a noticeable tumble-home, as was typical of North Sea vessels.²⁰¹ The superstructure included both an aftcastle that stood above a stern-post rudder and a smaller forecastle with a bowsprit. These full rigged vessels earned their name from their sail configuration however, which typically consisted of square sails on the main and foremast and a lateen rig on the mizzenmast.²⁰² Such a combination offered a balance of speed and maneuverability, allowing for coastal and open-sea navigation. The general design of the full-rigged vessel emerged in the late 1400s and early 1500s partly as a response to the demands of rapidly expanding Portuguese and Spanish maritime commerce and exploration. Iberian seafarers, who for the first time were crossing the Atlantic and rounding the African Cape, found themselves in need of larger and sturdier vessels able to withstand the demands of longer voyages and larger cargos.²⁰³ However, once Spaniards rounded South America and the Portuguese had entered the Indian Ocean, their distance from home created a number of problems, not least of which was how to repair their vessels, resupply needed food and water, and replenish the ranks of their crew.

In addition to altering their own ship designs to make vessels more durable and able to take on greater volumes of cargo, a more immediate solution to the problem of thriving on the high seas was to exploit the rich and productive shipbuilding traditions of Asia. This was a strategy readily seized upon by the Portuguese entering the Indian Ocean basin in the last years of the fifteenth century. For the Spanish in the Asia-Pacific region, the struggle was prolonged.

²⁰¹ Tumble-home refers to a curved hull shape with greater breadth at the water line than at the main deck.

²⁰² Guilmartin, 91.

²⁰³ Smith, 31.

However, as this study will show, once Spain's men of the sea had reached the Philippines they were able to exploit local resources for the repair and construction of new vessels. In many instances Asian designs and vessels were appropriated wholesale. Many local water craft, both large and small, were found to be far more durable and better suited to the local environment than European vessels.²⁰⁴ Also of benefit to the newly arriving Europeans was the fact that many coastal populations throughout Southeast Asia were thoroughly experienced seafarers and navigators. Such populations were exploited for their knowledge and skill by both Spanish and Portuguese expeditions.²⁰⁵ Coming to rely upon Asian resources was a slow process for the Spanish and only began to pay dividends late in the century.

This is not to say that European vessel designs did not endure or thrive in the age of exploration. Many of the ship styles of Europe found heavy use on these longer maritime routes to Asia, but, it should be noted, only with significant alterations. Changes in ship designs were dictated by the demands of new shipping routes and by the new and distant environments in which European merchant-explorers sailed. Changing the designs of caravels, *naos*, and other vessel types was a necessary measure if Spain was to regularly traverse the Atlantic and if Portuguese sailors were to effectively wield influence in the distant Indian Ocean. It is also worth noting that repairs made far from home necessarily involved foreign materials and shipwrights who knew nothing whatsoever of European methods. Later in the century, once Spanish mariners came to realize the immensity of the *Mar del Sur* and once the Portuguese came to appreciate the full extent of the commercial opportunities in the Indian Ocean basin, further and more radical

²⁰⁴ For a global perspective on the relative dynamism of Asian seafaring and shipbuilding versus that of Europe, see Frank, 197 – 200. For an assessment of Philippine shipbuilding traditions specifically, see William Henry Scott, *Boat Building and Seamanship*.

²⁰⁵ Ahsan Jan Quiason, *The Indian Response to European Technology and Culture, AD 1498 – 1707* (New York: Oxford University Press, 1982).

changes to Iberian vessels were in order. Such changes often took place not in the shipyards of Europe but in the many ports and harbors of South and Southeast Asia, using local materials and local labor and local methods.²⁰⁶

By the latter half of the sixteenth century Portuguese mariners had ultimately found that the long and punishing voyage into the contested waters of South Asia required something a great deal more than the modestly sized caravels and *naos* used by Bartolomeu Diaz and Vasco da Gama. Such a sailing route required a vessel capable of taking on a tremendous amount of cargo for commercial transport, having enough size and durability to withstand a 25,000 mile round trip between Lisbon and Goa, but at the same time being able to serve as a vessel of war in the contested waters of the Indian Ocean.²⁰⁷ To meet these demands, the Portuguese developed the *nau* into a hulking vessel, typically 600 tons but measuring anywhere up to 1,600 tons by the 1590s, and even over 2,000 tons in a few cases.²⁰⁸ The same process occurred once Spain reached the Philippines and found themselves in desperate need of large, durable vessels to accommodate a growing trans-Pacific trade. Spain's experience in the Philippines will be shown to be unique however. Being so far from home and operating a trade route that did not terminate or originate in Europe, Spain's men of the sea found themselves almost wholly dependent upon Asian resources and shipbuilding and found only minimal supplementary resources in the Americas in the sixteenth century.

²⁰⁶ Frank, 198; Pacey, 65 – 68, 123 – 128.

²⁰⁷ Hazlett, 33.

²⁰⁸ Russell-Wood, 28; Unger, *The Ship in the Medieval Economy*, 228.

Shipbuilding in Spain in the Era of Magellan

The experiences of the Magellan and Loáisa expeditions outlined below will vividly demonstrate the ways in which the sailing vessels of the late fifteenth and early sixteenth century were in no way up to the task of Pacific navigation. The fantastic attrition experienced by these early Pacific mariners made it clear that not only were larger more durable ships required to reach Asian waters, but shipbuilding efforts would need to be relocated closer to their objective, ideally somewhere along the Pacific Rim. Here let us consider the many components that went into ship construction. Such an analysis will better put into perspective the costs of assembling trans-Oceanic expeditions, but also, and more importantly, will foreshadow the difficulty inherent in relocating such a complex and involved industry to the distant Pacific.

The availability of timber was the primary factor in determining where large vessels could most easily be constructed. While many smaller vessels, particularly those of 50 tons or less, could be produced quickly and cheaply in most ports and shipyards throughout Europe and Asia, assembling fleets of well-provisioned vessels like those used by Magellan, Loáisa, Cabot, and Garcia, often required the financial backing of both a state and one or more banking houses as well as the facilities of only the largest and most well-established shipyards.²⁰⁹ Of those Spanish shipyards capable of assembling such fleets, nearly all were located along the northern Basque coast, where the necessary raw materials were most abundant and most easily obtained. Of the timbers most needed for shipbuilding, oak, pine, chestnut, and beech could be found in the Spanish Basque provinces as well as in the Pyrenees and the Galician sierras. On account of its strength and durability oak was used for the planking of the hull and the internal support

²⁰⁹ *Astillero* comes from the Spanish word for the framing of a ship. Phillips, 48.

structures of vessels, such as the futtocks, stem and stern posts, and the keel and keelson.²¹⁰ The vast oak forests of Northern Spain were a great advantage to the Crown and benefited both the maritime defense of Spain and its trans-Atlantic commerce.²¹¹ Pine, being lighter, was ideal for use in a vessel's superstructure.²¹² The inner planking and deck was often finished with larchwood or pine. Boxwood and walnut were requisitioned for the construction of various tackle and block pieces, while smaller fixtures and decorative pieces were made from elm or poplar. Iron ore and charcoal, which were also plentiful in Northern Spain, were necessary not only for the production of anchors and nails, but smaller belaying pins, locks, grills, rings, and chains.²¹³ Not all materials were locally available in Northern Spain however. The largest elements of a vessel, namely the masts and the keel, almost always required that pine timbers be imported from Northern Europe. Ideally hewn from a single length of timber, masts and keels required trees of tremendous size and durability with a vertical axis nearly perfectly straight. Many mainmasts and keel beams used in Spain's vessels in the sixteenth century were imported from Prussia and the Baltic Sea region.²¹⁴ The shipbuilders of northern Spain also looked to Scandinavia for such

²¹⁰ The keel is the main central beam running the length of the ship's hull. A keel was ideally fashioned from a single piece of timber. A keelson runs parallel and above the main keel, ensuring additional strength and often providing the foundational mounting for the mainmast. Futtocks are the larger curved timbers that form the frame of a ship's hull. Stem and stern posts are the main fore and aft beams extending upwards from the keel.

²¹¹ Goodman, 68.

²¹² Phillips, 79.

²¹³ The logistics of shipbuilding were complicated by the widespread preference to fell timbers during winter months only, specifically when it was coolest and the moon was waning. Adhering to the *menguantes* (as the period of waning moons from November to January was called in Spain) ensured that the sap and moisture of trees was fully receded, thus, it was thought, making timbers stronger and less prone to rot. Naval historian David Goodman has found a number of instances where the construction of vessels was delayed in the sixteenth and seventeenth century on account of lunar and seasonal cycles. If orders for ship construction were issued just after the *menguantes*, construction was often delayed for the year until the next winter. Goodman, 109 – 111. Smith, *Vanguard of Empire*, 28; Phillips, *Six Galleons*, 81; Gay and Ciano, 14.

²¹⁴ Phillips, 49 – 50.

timbers. Sprucewood, was largely imported from more southerly locations such as Andalucía and Corsica.²¹⁵ Shipbuilding was an endeavor requiring numerous and specific raw materials, thus making the process of establishing new shipyards—such as in the Pacific—exceedingly difficult if the proper materials were not available.

Though the exact ratio fluctuated a great deal, a typical galleon, *nao*, or caravel required roughly 1.6 oak trees per ton. Thus a vessel of 560 tons size—average for the late 1500s—required timber from roughly 900 oak trees.²¹⁶ Carla Rahn Phillips estimates the average vessel size in the late sixteenth and early seventeenth centuries to have been more like 325 *toneladas* and to have required 16,000 *codos* of wood (or 520 oak trees).²¹⁷ As control of the seas became increasingly contested by western European states in the early modern era, the cost of timber, and therefore ship production, soared. By the mid sixteenth century Spain was engaged in massive commercial operations in the Atlantic and Americas while at the same time heading off Ottoman encroachment in the Mediterranean and struggling with the rise of both the English and Dutch navies globally. As such, timber consumption accelerated tremendously in the sixteenth century. By the 1600s England, Spain, Portugal, and France had begun to exercise strict control and management of their forests. One historian has estimated that shipbuilding costs in Venice rose some 214 percent between 1580 and 1643 largely due to timber scarcity.²¹⁸ While forest management had been in place for centuries throughout Spain, Philip II was the first monarch to enact legislation protecting timber supplies explicitly for use in shipbuilding.²¹⁹ To underscore

²¹⁵ Gay and Ciano, 14 – 15.

²¹⁶ Wing, 128; Goodman, 70 – 72.

²¹⁷ Phillips, 79.

²¹⁸ Lane, 264 – 265.

²¹⁹ Goodman, *Spanish Naval Power*, 70; See also, David Goodman, *Power and Penury: Government, Technology and Science in Philip II's Spain* (Cambridge: Cambridge University Press, 1988), 89 – 96.

the importance of timber to the early-modern European state, Spain created the office of Superintendent of Forests and Plantations (*conservador*) in the 1570s, a bureaucratic measure taken in most states in Europe at that time.²²⁰ Indeed, Spain struggled with local authorities to secure access to a number of vital resources for much of the sixteenth century, and timber played a central role in that struggle. Naval historians David Goodman and Jan Glete have written many works stressing the role of forestry and timber resource management as a key process in state formation and the centralization of state authority in the early modern period.²²¹

There was much else that went into the construction of a sailing ship aside from timber. The rigging of a vessel was a key component that often required imported materials as well. The heavy standing rigging, which provided structural support, as well as the running rigging used for securing and adjusting the sails, required tremendous amounts of hemp (*cañamo* or *Cannabis sativa*). Spain imported hemp fiber primarily from Bordeaux, Brittany, and Flanders, though smaller amounts were produced more locally in Navarre.²²² The rope and rigging were no small component of a ship and required nearly constant maintenance and replacement. The typical ratio for sixteenth century ships was that 0.67 *quintales* of cable and rope were required for every *tonelada* of a vessel.²²³ This equated to hundreds of *quintales* of rope and rigging for ocean going vessels, and hundreds of pounds more held in reserve. Each piece of rope was wound by hand from hemp fiber. The heaviest rope used for the main shrouds and mooring cables involved many time-consuming procedures to ensure durability and weatherproofing—there was the spinning of the rope itself, worming the seams, coating the rope in tarred strips, and finally

²²⁰ Goodman, *Spanish Naval Power*, 70; Wing, “Keeping Spain Afloat,” 127.

²²¹ See Glete, *Warfare at Sea*; Glete, *Navies and Nations*; Goodman, *Spanish Naval Power*.

²²² Smith, 98. The fibers used in Europe for rope making during the early modern era was from the hemp species *Cannabis sativa*. H. L. Edlin, *Man and Plants* (London: Aldus Books, 1967).

²²³ Phillips, 83; “Diálogo,” in Fernandez Duro, *Disquisicones náuticas*, 6:149.

coating the entire length with a layer of tightly packed spun yarn.²²⁴ When Spanish shipbuilding was established in Manila, the locally available variety of hemp, *abacá*, was so strong that it often required no treatments or reinforcing of any kind, thus cutting costs tremendously.

Rope was often the single most expensive component of sailing ships in the early modern era. To take one example: Magellan's five ships cost a total of 1,316,250 *maravedis* to purchase in 1519, yet the cost of re-rigging the vessels with new rope before their departure amounted to 358,842.5 *maravedis* in labor and material expenses, nearly 30% the cost of the vessels.²²⁵ The cost of rigging relative to the value of the vessel itself would remain high throughout the sixteenth and seventeenth century and account for a large portion of expenses during ship construction. Carla Rahn Phillips' study of six Spanish galleons constructed in 1626 reveals that of a total cost of 79,752 *ducados*, an estimated 21,373 *ducados* (or 26.7%) had been spent on the 1,781.1 *quintales* of rope and rigging needed for the vessels. This was more than the cost of all the wood for the hulls of the six ships, which taken together measured some 2,400 *tonneladas*.²²⁶ As we will see in chapter 3, Spaniards had great difficulty in constructing ships along the Pacific coast of New Spain in part because rope—along with many other components—had to be imported from Europe. With the colonization of the Philippines however, Spaniards found an abundant supply of native fibers, which greatly reduced shipbuilding costs.

Sails were yet another component of vital importance to shipping, and like timber and hemp, sailcloth was tremendously costly to import. Sails were assembled at Spain's shipyards from canvas cloth imported from the towns of Nantes, Olonne, and Pouldavide in Brittany as

²²⁴ Smith, 98 – 99; Phillips, 82.

²²⁵ Stefan Zweig, *Conqueror of the Seas: The Story of Magellan* (New York: The Viking Press, 1938), 319. Navarrete lists the costs as totaling 1,315,500 *maravedis*. Navarrete, *Colección de los Viajes y descubrimientos que hicieron por mar los españoles desde fines del siglo XV*, volume 4: 3.

²²⁶ Phillips, 83.

well as few other regions throughout western France.²²⁷ Sails had to be carefully measured and fitted for specific masts and yardarms. And again, like rigging, vessels were required to carry a great deal of sailcloth in reserve. If we look to Magellan's expense records once again we see that 149,076 *maravedis* was spent on new sailcloth and an additional 32,825 *maravedis* for the necessary thread, needles, and labor to create and outfit the sails.²²⁸

The availability of labor was just as crucial a factor in determining the location, size, and productivity of a shipyard as was raw material supply. Most tasks involved in the construction of a vessel required a great deal of training and skill on the part of both masters and apprentice laborers. As such, expanding production at shipyards and founding new shipyards were processes that were strictly limited by the availability of labor and the time it took to recruit and train new tradesmen. Historian Alejandro de la Fuente has compiled average periods of apprenticeship for major port industries based on labor contracts signed from 1578 to 1610 in Havana. As a colonial port that lacked an established urban infrastructure sixteenth-century Havana needed to train a great deal of craftsmen in a wide range of occupations. Blacksmiths, carpenters, shipwrights, caulkers, and sail makers—those trades directly tied to the shipbuilding industry—had the longest terms of apprenticeship, ranging from 35 months in the case of caulkers to 49 months in the case of shipwrights.²²⁹ Only goldsmiths and silversmiths required greater terms of apprenticeship. That shipwrights and related occupations required such prolonged training highlights the craft-like nature of shipbuilding. In other respects, shipbuilding had an industrial character as well, a fact reiterated in David McGee's study of English

²²⁷ Smith, 103; Escalante de Mendoza, *Itinerario de navegación*, 38; Barkham, *Report on 16th-century Spanish Basque Shipbuilding*, 41; Phillips, 82.

²²⁸ Zweig, 319. Figures likely taken from, Navarrete, 4: 3 – 9.

²²⁹ De la Fuente, 29.

shipbuilding in the early modern era.²³⁰ This time commitment as well as a general scarcity of labor was yet another factor that added to the cost and difficulty in establishing new shipyards outside of Europe. Building a vessel in Havana in 1617 – 1618 cost 47.3 *ducados* per *tonelada*.²³¹ In contrast, shipbuilding rates were only 24 – 27 *ducados* per *tonelada* in Flanders at the same time and some 30 *ducados* per *tonelada* in Spain.²³² As we will see in the following chapters, the further shipyards were from Europe, the higher production costs soared. This became a particularly acute problem once Spain had reached the Pacific coast of the Americas where labor and materials were scarce and expensive and the production of even modestly sized vessels involved exorbitant sums of specie. It was crucial then that Philippine labor and timber were abundant and relatively cheap.

Shipbuilding in the late fifteenth and early sixteenth century, as described here, yielded vessels of remarkable fragility and limited service life. To properly maintain a caravel or *nao* for trade in either the East or West Indies required extensive repairs most every year. The impossibility of such repairs in the distant Pacific undermined Spain's objectives there and was the overarching cause of Spain's earliest failures in the Asia-Pacific region. Spain's men of the sea would continually fail to make any territorial or commercial gains in Southeast Asia until a sustainable and productive shipyard with all the necessary materials and laborers was established close by. As it stood in the early sixteenth century, however, no matter how productive Spain's Basque shipyards were they were simply too far removed from the *Mar del Sur* to offer any meaningful support.

²³⁰ McGee, "From Craftsmanship to Draftsmanship: Naval Architecture and the Three Traditions of Early Modern Design," *Technology and Culture* 40 (1999): 209 – 236.

²³¹ Phillips, 79; Lawrence A. Clayton, *Caulkers and Carpenters in a New World: The Shipyards of Colonial Guayaquil* (Athens, OH: Ohio University Center for International Studies, 1980) 87 – 92.

²³² Phillips, 79.

The Experiences of Magellan, Cabot, Loáisa, and Garcia

The first four attempts Spain made at reaching Southeast Asia were conducted with the aim of securing a foothold in the Spice Islands. The armadas of Ferdiand Magellan, García Jofre de Loáisa, Sebastian Cabot, and Diego Garcia were unique in the early history of trans-Oceanic navigation in that they were the only such voyages to attempt a trans-Pacific voyage by way of Iberian ports directly. The first expedition, led by Ferdinand Magellan, departed from Seville in 1519, while the following three armadas departed from the northern port of Carúña between 1525 and 1526. Taken together, eighteen vessels and most of their crewmen were lost. Only Magellan's *Victoria* and eighteen of the original crew found success, but only just. This study will now examine what prevented Spain's success in these early cases of trans-Pacific navigation by turning to the specific experiences of these first four expeditions. How well (or poorly) Spain's ships and crews withstood the attrition of long-distance voyaging will be of primary concern. The successful extension of Spain's power overseas was contingent upon the distance that needed to be sailed, the quality of the vessels used, and the ability of its domestic shipbuilders and seafarers. In the case of the first four expeditions, the distance was far too great to safely navigate the Pacific. Indeed, it was the failures of these seventeen vessels that underscored the fact that Spain's shipbuilding industry would have to be recreated anew in the Pacific basin for there to be any hope of gaining direct access to the markets and goods of Asia.

The first *Armada de Molucca* consisted of five ships: the flagship *Trinidad*, the *San Antonio*, the *Concepción*, the *Victoria*, and the *Santiago*.²³³ These vessels were small craft with broad beams and sturdy hulls suited for trans-oceanic navigation. The flagship measured 110

²³³ *Trinidad* was of 110 tons, the *San Antonio* was of 120 tons, the *Concepción* 90 tons, the *Victoria* 85 tons, and the *Santiago* 75 tons. Noone, 34; Cushner, *Spain in the Philippines*, 233.

toneladas while the smallest vessel, *Santiago*, was 75 *toneladas*.²³⁴ Though no contemporary likeness of these vessels exists, we do know that the *Santiago* was a small caravel and that the remaining four vessels were *naos*.²³⁵ Despite his gross under-estimation of the breadth of the *Mar del Sur*, Magellan no doubt anticipated a long voyage and therefore favored the greater cargo capacity available with the *nao*. It is unfortunate that so little is known about these first five trans-Pacific vessels before they were given over to Magellan. Historian Samuel Eliot Morison laments that all we can say for sure is that the *Victoria* was constructed in the Basque province of Guipúzcoa (*Gipuzkoa*).²³⁶ We can also say for certain that these vessels were not constructed specifically for Magellan's voyage but had been in service some time before their departure for the Spice Islands. This may have been a wise choice; newly built ships were not always favored for long voyages as they had yet to prove their seaworthiness. Regardless of their age and origin, we know that all five ships were purchased for Magellan in Cadiz and Sanlúcar de Barrameda and brought up river to Seville for extensive repairs and provisioning.²³⁷

It was after inspecting the newly purchased ships upon their arrival at Seville that a representative of the Portuguese crown, Sebastião Alvares, reported to his king that Magellan's small fleet was in such poor condition that he would not have even dared sail the vessels to the Canaries, adding that their supporting ribs were "soft as butter."²³⁸ Likely this was an

²³⁴ In *toneladas*, Magellan's fleet measured the following: *Trinidad*, 110, *Concepción* 90, *Victoria* 85, *Santiago* 75, *Santo Antonio* 120. A Spanish *tonelada* in this case was roughly equivalent to 1.521 cubic meters. However, both the *tonelada* and the smaller Portuguese *tonel* of 1.275 cubic meters were in use—often interchangeably—throughout Iberia. Thus a sixteenth-century *tonelada* had a displacement of anywhere between "1.7 and 2.2 modern metric tons." See Castro, 69.

²³⁵ See Spate, 15 – 20.

²³⁶ Morison, *Southern Voyages*, 342.

²³⁷ Zweig, 319. The total value of the fleet is recorded as being 1,316,250 maravedis. See also Martín Fernández de Navarrete, 4.

²³⁸ Morison, *Southern Voyages*, 337; Spate, 40.

exaggeration for the sake of King Emmanuel of Portugal, who was understandably apprehensive regarding his former subject's desire to strike off for the Moluccas under the employ of his Iberian rivals. This comment offers further proof that Magellan's five ships were not newly built in 1519, but had been in service for some time prior. Regardless of the condition of Magellan's ships upon their purchase, records of account show that they were thoroughly restored, cleaned, and refitted once at Seville. Here we get a glimpse of the tremendous costs involved in repairing ships in the early sixteenth century.

Carpenters were hired to refit the hulls of Magellan's newly acquired ships at the cost of 104,244 *maravedis*. Caulkers were hired at the even greater cost of 129,539 *maravedis*, and woodworkers were needed for preparing the planks, which cost a further 6,790 *maravedis*.²³⁹ Each ship in turn was either careened or hauled upon the sandy beach along the inner bend of the Guadalquivir in Seville. Every scrap of rotted wood was removed from the five hulls and replaced; old caulking and pitch were pulled from every seam and entirely reapplied.²⁴⁰ Counting the many labor expenses, plus the costs of the required materials (which included timber, pitch, tar, oakum, grease, sheet metal, and nails), as well as the added expense of wholly new components (such as sails, yards, spars, pumps, anchors, ropes, and tackle), a total of 1,482,312 *maravedis* was spent in preparing the fleet. Consider that this is more than 1,316,250 *maravedis* that was spent to purchase the five ships!²⁴¹ The total expense of Magellan's armada, taking into

²³⁹ Navarrete, 4: 3 – 9. This source is available in translation in Zweig, 319 – 325.

²⁴⁰ Zweig; Philips; Morison, *Southern Voyages*, 340.

²⁴¹ Matin J. Noone has noted that the exceedingly high cost of the *Victoria* would suggest that vessel was in much better condition when it was purchased and therefore required a great deal less in repairs. It is interesting to consider a connection that on the one hand the *Victoria* cost a thousand *maravedis* per ton more than the other ships in Magellan's fleet, and on the other hand the *Victoria* was the only Spanish vessel to survive a voyage to East Asia and back. See Noone, 34. *Trinidad* cost 2,454 *maravedis* per ton, the *San Antonio* 2,750 *maravedis* per ton, *Concepción*

account all of the above costs, plus the wages of officers and crew, the necessary victuals, arms, navigation equipment, cook wear, tools, and so on, was 8,751,125 *marvedis*. To meet this large bill Charles V put up 6,454,209 *maravedis* and the remainder was offered up by the Fuggers who were represented in this endeavor Christopher de Haro, another ex-Portuguese subject. De Haro would later serve as the major backer and organizer of the next three of Spain's voyages to the Pacific. The close involvement of such a prominent banking family is another indication of the unusually high expenses and risks of oceanic voyaging at this time as well as the overlapping contributions of various state and non-state organizations.²⁴²

In addition to Magellan's five ships, he had at his command somewhere around 275 men.²⁴³ Though the majority of Magellan's crewmen were natives of Spain, a cosmopolitan mixture of Sicilians, French, Germans, Flemings, Greeks, Genoese, English, and Portuguese comprised roughly a third of the crew.²⁴⁴ This mixture of nationalities aboard the fleet, particularly the mix of Portuguese and Spaniards, led to great tension and a number of mutinies en route to the Pacific. Such a mixed crew could not be helped however. Too few of Spain's

cost 2,533 *maravedis* per ton, *Victoria* was a much higher cost of 3,529 *maravedis* per ton, and the little *Santiago* cost 2,500 *maravedis* per ton.

²⁴² See the introduction to Stern's *The Company State*.

²⁴³ The exact number of crew in Magellan's fleet is unknown. Many works falsely cite a figure of 237, which was originally provided by Pigafetta. This number is merely the number of crew who enlisted at Seville prior to departure and received four months of pay in advance. We can safely assume many more crewmen were added as the departure date neared. Martín Fernández Navarrete offers a detailed manifest of 265 names and F. H. H. Guillemard, using the incomplete manifest as well as the autos fiscales connected with the voyage, finds that at least 268 persons were aboard but he reasons that the actual total was likely closer to 280. Hugh Thomas puts the total number of crewmen after departing the Canaries at 276. See Navarrete, 4: 12 – 26; F. H. H. Guillemard, *The Life of Ferdinand Magellan* (London: 1890), 326 – 329; Hugh Thomas, *Rivers of Gold: The Rise of the Spanish Empire, From Columbus to Magellan* (New York: Random House, 2005), 498.

²⁴⁴ It should be noted that assembling a crew of such mixed nationality was a violation of the king's direct orders. Where king Charles V commanded that there should be no more than five Portuguese aboard the fleet, ultimately we know that at least thirty-seven departed with Magellan. Morison, *Southern Voyages*, 341; Guillemard, appendix III.

experienced seamen were willing to sign on to such a risky voyage. Seafaring was always a dangerous occupation in the early modern era but the risks of Pacific navigation were excessive. With so many experienced European crewmen unwilling to work in the treacherous *Mar del Sur* the Manila galleons were only able to operate by forcibly conscripting natives of the Philippines to serve as crewmen. As later chapters will show, it was typically the case that at least 60% of a Manila galleon's crew was of East and Southeast Asian origin.²⁴⁵ This was not just a function of the perceived dangers of Pacific voyaging, but was more directly the result of there being so few "Spaniards" in Spain's overseas possessions.

Thus with ships refitted and crewmen heavily compensated with the promise of a share in valuable spices, Magellan's fleet set out from the Guadalquivir in September and cleared the Canaries in early October of 1519, reaching the Atlantic coast of South America on 29 November 1519. At that point Magellan's five ships and his crew had already matched the longest non-stop voyage by any European but had yet to even reach the half-way point of their trek. While the five vessels had held up remarkably well, the same could not be said of the crewmen. Rations were already reduced to half by the time the armada reached South America. The psychological effects of having to endure such great distances, the fear of the unknown, cramped living quarters, and the onset of hunger and sickness compelled many officers and

²⁴⁵ Magellan had trouble in even recruiting a crew in Spain willing to undertake the voyage. As an incentive to join, the commanders of the earliest voyage across the Pacific offered cargo space as an incentive. Any goods taken aboard these fleets could be exchanged for spices and other high-value items once in Asia. Using Magellan's manifest as an example, the captain general (Magellan) was granted the right to 82 quintales, masters and pilots were given 17 quintales, and lowly sailors 3.5 quintales. At the going rate of a single quintale of Southeast Asian spices, a sailor could earn roughly an entire year's pay with his share of cargo space, while Juan Sebastián del Cano, the commander to return the *Victoria* safely back to Spain, had at his disposal 508,720 maravedís worth of spice compared to his official salary of 104,535 maravedís. A *quintail* was equivalent to 46 kilograms in spice. See Mallaína, 101.

crewmen to organize a retreat back to Spain under the guise of any available excuse. Mutiny was always a likely occurrence on any voyage of exceptional duration in the age of sail, but never more so than on the first *Aramada de Molucca*.

Once Magellan's fleet reached Brazil, his five vessels pressed southward skirting the South American coast as far as 49° S for the first months of 1520 until the stormy winter of the southern hemisphere began to set in. Magellan made the decision to put in at Puerto San Julián in early April and wait for calmer weather. It was during this five-month layover that mutinous crewmen seized three of the five ships in the hopes of immediately turning for home. Only by acting swiftly and boldly were those loyal to Magellan able to reclaim the three ships.²⁴⁶ Further hardships during that winter included the loss of the *Santiago* and much of its cargo. The *Santiago* departed San Julián in May to reconnoiter ahead of the main fleet but fell victim to the lingering harsh winter weather, running aground near Rio Santa Cruz. All of the crew survived but only a portion of the cargo was salvaged. It was not until late August that the fleet moved on to Rio Santa Cruz and not until 21 October did Magellan finally discover his passageway into the Pacific Ocean. At this point Magellan's fleet was fourteen months into the voyage and they had not even entered the *Mar del Sur*. At this crucial moment, as the fleet was navigating the treacherous straits, the officers and crew of the *San Antonio* (roughly sixty men in all), struck off for home while the other three ships were out of sight. Being the largest vessel of the fleet with the most provisions aboard, the loss of the *San Antonio* was a mighty blow to the viability of

²⁴⁶ Morison, *Southern Voyages*, 370. The leaders of the insurrection and at least forty disloyal crewmen—which included all three captains as well as the future hero of the voyage, Sebastian Elcano—were sentenced to death. Only four men were executed however. If Magellan had executed all those found guilty of mutiny, he would not have had enough men to operate the fleet.

Magellan's mission and to the morale of his remaining crewmen. Nevertheless, Magellan pressed on with his three ships and roughly 200 remaining crewmen.

The record kept by Antonio Pigafetta shows quite vividly that the Pacific crossing, which took three months and twenty days, was the most grueling and awful experience of the entire voyage. Despite the calm weather and steady winds Magellan's crew enjoyed, the Pacific was still much too vast a sea to endure. One often-quoted passage from Pigafetta's account tells of the greatest hardships during the long Pacific crossing.

On Wednesday the twenty-eight of November, one thousand five hundred and twenty, we issued forth from the said strait and entered the Pacific Sea, where we remained three months and twenty days without taking on board provisions or any other refreshments, and we ate only old biscuit turned to powder, all full of worms and stinking of the urine which the rats had made on it, having eaten the good [parts]. And we drank water impure and yellow. We ate also ox hides which were very hard because of the sun, rain, and wind...²⁴⁷

In such conditions the ill effects of malnutrition and hunger took their toll. Nineteen men died during the crossing, plus a native captured in Patagonia. An additional thirty men were suffering so greatly that they were unfit for work and could no longer eat anything on account of swollen gums and lost teeth.²⁴⁸ By the time Magellan's fleet had reached the far side of the Pacific there were no longer enough fit men to operate all three ships. After Magellan's demise on the island of Mactan the surviving crewmen were forced to strip the *Concepción* of any useful parts and abandon the vessel for lack of hands to sail her.²⁴⁹ However, prior to Magellan's demise, his

²⁴⁷ Pigafetta, *A Narrative Account*, 57. The ox hides refer to the leather sail covers which Magellan's crew attempted to eat, along with shavings of wood taken from the masts of the vessels.

²⁴⁸ Such symptoms are indicative of scurvy.

²⁴⁹ Pigafetta, *Magellan's Voyage*, II: 13. "at a distance of eighteen leguas from the island of Zzubu, at the head of the other island called Bohol, we burned the ship 'Conceptione,' for there were to few men left [to work it]." Regarding the number of crew left alive at this point in the voyage, one can only estimate. Martin J. Noone proposes 120 surviving crewmen after 60 fled

expedition found some success in forging a peaceable relationship with the inhabitants of Cebu through a blood pact with the local ruler, Hamubon, and by baptizing many hundreds of natives.²⁵⁰ It was from this first alliance that Magellan and his crew were able to secure badly needed food to sustain their enterprise—an asset of far more immediate importance than gaining Christian souls. Here then we have the first case of Spanish dependency upon an indigenous Philippine community. And it should not go unnoticed that this first Hispano-Philippine relationship was forged through the aid of a native Southeast Asian, Enrique de Malacca, who served as interpreter and guide for Magellan’s fleet.²⁵¹

After Magellan’s demise on Mactan (while fighting on behalf of Spain’s newest Christian ally) the alliance between the Spanish and Cebuanos deteriorated spectacularly and almost immediately.²⁵² No longer having a friendly port to set down anchor Magellan’s surviving crew continued South in the direction of the Spice Islands. Their route was haphazard, sailing through the Bohol Strait to northern Mindanao. With food aboard ship only enough to last a few days more, the route the *Trinidad* and *Victoria* took were largely dictated by hunger. At Cagayan the crew learned from locals, who were themselves unwilling to give up any rice, that Palawan was sure to have plentiful supplies. Indeed, at Palawan Magellan’s remaining crew managed to secure 114 pounds of rice for “three lengths of Brittany linen.”²⁵³ With some food secured there

with the *San Antinio*, 35 having been killed at Cebu and Mactan, and 40 dying from scurvy and sickness. See Noone, 87.

²⁵⁰ Noone, 73 – 74. Roughly five hundred Cebuans were baptized in the ceremony of alliance, on Saturday, April 13, 1520. Although it would be impossible to ascertain an exact figure of conversions made during the entirety of Magellan’s stay, Transylvanus (the first editor and publisher of Pigafetta’s account) estimated 2,200 Christian converts.

²⁵¹ Enrique de Malacca was included as part of Magellan’s crew in Spain. Enrique reached Europe aboard Portuguese vessels years prior. See the introduction to Chapter 5.

²⁵² For more on the deterioration of Spanish relations with the peoples of Cebu, see Zweig; Morison, *The Southern Voyages*.

²⁵³ Noone, 88.

was still the issue of navigation in unfamiliar waters. After failing to hire a number of pilots to take them to the Moluccas it was all the desperate Spaniards could do to capture three Muslim pilots in port and force them to direct the way.²⁵⁴ This would be a tactic repeated time and again by the crew of European vessels sailing in Asian waters in the sixteenth century. Local Southeast Asian pilots would prove instrumental in navigating nearly all of Spain's vessels in Asian waters, including the Manila-Acapulco galleons.

From Palawan their new pilots took them south to Borneo where the *Trinidad* and *Victoria* weighed anchor at Brunei Bay on 9 June 1521. At Borneo the Spaniards were granted an audience with a local leader, Siripada.²⁵⁵ It was here that the Spaniards inquired as to what the locals used to caulk the hulls of their ships. After so long at sea, the *Trinidad* and *Victoria* were in a poor state. With hulls leaking and worm-eaten neither vessel would be able to reach home without extensive repairs. It was a Bornean envoy that informed the Spanish of their mixture of coconut oil and beeswax, which locals used as pitch.²⁵⁶ This mixture was to prove vital in getting the *Victoria* and *Trinidad* seaworthy once again and in repairing a great many more of Spain's Pacific vessels in the future. In Spain and throughout Europe, the hulls of ships were protected from shipworms and the inevitable rot with combinations of tarred cloth, grease, and often times a thin lead sheathing, all applied below the waterline. Even during the early phases of construction carpenters were careful to place knotholes and other imperfections in the lumber facing inwards to prevent any premature deterioration and rot on the exterior of the hull. And before applying any protective coating a mixture of tar and hemp fiber was used to fill open

²⁵⁴ Noone, 88 – 89.

²⁵⁵ Noone, 89; James Burney, *A Chronological History of the Discoveries in the South Sea or Pacific Ocean*, vol. 1 (London, 1803), 88.

²⁵⁶ Noone, 89.

seams in the hull prior to caulking and sheathing.²⁵⁷ Generally speaking, the hulls of most Spanish-built ships bound for the Far East in the sixteenth century did not last long enough to attempt a return journey, no matter how well crafted. As Magellan's crew found (and as Loáisa, Villalobos, Saavedra, and Legazpi were to find for themselves later in the century) just one Pacific crossing required careening and extensive replacement of hull planks if a second trip was to even be attempted. Thus, local Southeast Asian timbers and mixtures of caulk substitutes proved vital in keeping Spain's ships watertight.²⁵⁸ As will be shown below, this problem of attrition was eventually overcome by simply building ships in Southeast Asia rather than Europe or America. However, doing so was only possible once the required resources had been secured in a friendly Asian harbor. This would not be the case until Manila became available to the Spanish in 1571.

After visiting the Sultan at Borneo and trading for badly needed goods, the Spaniards encountered a number of junks, aboard one of which was "the son of the king of the island of Luzon." Antonio Pigafetta's voyaging account states that their new captive "was the captain-general of the king of Burne and came with those junks from a large city named Laoe, which is located at the end of that island [Borneo] toward Java Major."²⁵⁹ This was the first of many instances where Spaniards seized natives of high status for ransom, navigational aid, or both. Their new hostage was valuable indeed, and the Spanish were able to ransom him for more

²⁵⁷ Phillips, 57.

²⁵⁸ Caulking the seams of a ship's hull proved to be of utmost importance, even in Europe. Carla Rahn Phillip's study of galleon construction in early seventeenth century Spain states that, "Even when everything was done properly, leakage was a major problem on most large ships; that is why pumps were a standard part of their equipment. Because of the nature of their work, caulkers worked more days on a given ship than carpenters, and major ports often faced a shortage of caulkers to handle a sudden influx of business, despite government efforts to increase their numbers." Phillips, 57.

²⁵⁹ Pigafetta, *Magellan's Voyage*, II: 37.

goods, including food and “one bahar of *anime*²⁶⁰ to calk the ships.”²⁶¹ The surviving Spanish found a suitable harbor to careen their vessels and apply the native mixture that was to serve as pitch at the extreme northern tip of Borneo. Pigafetta journal recounts an arduous forty-two days of repairs during which the crew collected nearby timber and applied the local caulking mixture to the hulls of the two ships.²⁶²

After departing Borneo the Spaniards ransomed the crew of another captured Muslim junk, which included the chief of Pulawan, *Tuan Mahamud*.²⁶³ It is indicative of the dire situation Magellan’s crew found themselves in that they exchanged their valuable hostage not for spices or valuable metals, but rather for “...rice, twenty goats, twenty pigs and one hundred and fifty chickens.” As historian Martin J. Noone amusingly notes, the Muslim official “overjoyed to get off so lightly, not only paid up before the stipulated eight days, but of his own accord threw in ‘coco-nuts, bananas and other edibles’ so that both sides became very friendly in the end.”²⁶⁴ Temporally resupplied, the Spaniards set off directly for the Spice Islands, rounding the northern tip of Borneo.²⁶⁵ Once at the island of Basilan the Spaniards captured yet another ship and took as prisoners an assortment of locals who directed them to the Spice Islands. By now the pattern of dependency should be clear. However, a lack of navigational knowledge and an inability to secure food hardly improved over time. These cases marked the start of roughly a half-century of complete Spanish dependency upon Asian resources and skills. It would not be until after the

²⁶⁰ I have been unable to find a translation or further discussion of this substance.

²⁶¹ Pigafetta, *Magellan’s Voyage*, II: 40 – 41.

²⁶² Pigafetta, *Magellan’s Voyage*, II: 36. This harbor was likely Ambong Bay.

²⁶³ Noone, 91.

²⁶⁴ Noone, 91. To secure this spontaneously made alliance, the Spaniards returned to *Tuan Mahamud* “some culverins of bronze” which had been taken from the seized junk.

²⁶⁵ Noone, 92.

founding of Manila in 1571 that Spaniards began to develop their own infrastructure in Southeast Asia.

So it was, with ships repaired using local materials and expertise, a starving crew kept alive with local foods, and captured local navigators piloting their course, that Magellan's expedition finally reached the island of Tidore on 8 November 1521. But the journey was only half over, and to reach home the ever-dwindling number of Spanish explorers would need to draw even greater support from local knowledge, products, and labor. The Sultan of Tidore, Almansur, warmly received the Spanish and lavished them with food and a tremendous amount of cloves for their return journey.²⁶⁶

On 18 December 1521, just as both ships were ready to depart and their cargo holds laden with cloves, the hull of the *Trinidad* ruptured while at anchor and all hands went to work unloading her precious cargo and working the pumps. Pigafetta's account claims that "we found that the water was rushing in as through a pipe, but we were unable to find where it was coming in."²⁶⁷ The sultan sent five of his best divers to find the leak but they were unsuccessful after a half-hour of searching. Thus the *Victoria* set off for the return voyage to Spain alone—a voyage that, despite great hardship, was a success. The *Trinidad* meanwhile, after another round of repairs, attempted a desperate run back across the Pacific in the hopes of reaching Darién. The crew was forced back by contrary winds and a damaged mainmast however. Once back in Southeast Asian waters the *Trinidad* had become wholly unseaworthy and her crew became the first of many Spanish crews to be stranded on the far side of the world.

²⁶⁶ Pigafetta states that Almansur provided the Spanish with 791 *cathils* of cloves directly, while many Spaniards bartered and traded for their own cloves throughout Tidore, trading their hats, cloaks, and even their shirts.

²⁶⁷ Pigafetta, *Magellan's Voyage*, II: 107.

As far as the *Victoria* goes, is important to note that it was not only Spaniards that navigated the vessel home, but also an unnamed contingent of thirteen Southeast Asians.²⁶⁸ These local navigators—including two native pilots from Tidore—aided in piloting the *Victoria* along the trade routes familiar to them, between Buru and Ceram, passing just north of Timor, and leading Sebastián del Cano out into the Indian Ocean. Relying upon Asian seafarers would be a long a continued tradition for Spanish expeditions in the Asia-Pacific region. Indeed, after the Pacific galleon trade had been established later in the century, many thousands more Asian seamen, slaves and crewmen were taken from Manila and points beyond and carried across the sea to the Americas. By the time the *Victoria* finally cleared the last Portuguese outpost at Cape Verde and anchored at Seville there were a mere eighteen of the original crewmen left alive. Foul weather had played its part in nearly destroying the vessel on a number of occasions; the worst occasion occurred at the Cape of Good Hope where high winds ripped off the foretopmast and foreyard completely.²⁶⁹ While history has regarded Sebastian del Cano as the savior of the expedition for getting the *Victoria* and her precious cargo back to Spain, history has been quick to overlook the fact that the expedition's return was nearly a failure. Similarly, histories all too often bypass the vital contributions of the local Southeast Asians who kept the *Victoria* seaworthy, kept the Spaniards from starving to death, and in all likelihood guided the ship for at least a portion of the voyage to Europe. All of these instances of dependency upon local Southeast Asians and the material resources of the region foreshadowed the large-scale exploitation of *Indios* and the environment in and around the Manila Bay region. Local supplies of food, skilled navigators and knowledgeable pilots, shipyard laborers, and building materials

²⁶⁸ Noone, 99.

²⁶⁹ Zweig, 287. Most masts during this period were not a single component but made from two or three sections. The topmast was an extension of the lower mast. A yard is the spar extending out from the mast upon which sails are set. The foreyard is the lowest yard.

were to all remain paramount resources throughout the early modern period, without which Spain's endeavors in the Asia-Pacific region would never take off.

With the return of the *Victoria* there followed a scramble to outfit a number of follow up voyages to the Moluccas. So great was the energy sparked by the *Victoria*'s miraculous return that over the course of the following year there were thirty-three royal concessions issued in Spain to parties interested in outfitting a voyage to Asia.²⁷⁰ Furthermore, a House of Spice Trade was established at Coruña as an organization wholly separate from the *Casa de Contratación*.²⁷¹ Headed by Cristobal de Haro, the House of Spice Trade was charged with the task of organizing and outfitting the voyages to the Moluccas. However, because of Spain's tremendous debts to most every major banking house in Europe—including the Fuggers—and the numerous conflicts that demanded attention throughout the continent, Charles V was neither willing nor able to provide funding for further voyages to the Spice Islands. The responsibility of financing Spain's voyages to the Pacific was taken over by the Fuggers, who used de Haro as their representative and managing director at Coruña. Within a matter of months following the sale of the *Victoria*'s cargo of spices, the Fuggers had offered up enough funding to organize two more *Aramadas de Molucca* with tentative plans for a third.²⁷² Having trans-oceanic ventures financed and operated by foreign interests was the norm in early modern Europe and is indicative of the exorbitant costs of maintaining empires and doing business in long-distance sea-borne trade. Trans-oceanic voyaging was tremendously expensive, far too expensive for a perpetually cash-strapped Spanish

²⁷⁰ Navarrete, 5: 196 – 207.

²⁷¹ Navarrete, 5: 196 – 207.

²⁷² Noone, 115. Martin J. Noone hypothesizes that Spain's forfeiture of control over the spice trade to de Haro "was in recompense for the enormous sums the emperor owed the Fuggers."

monarchy.²⁷³ Relinquishing the rights for voyages to Asia and the Americas was common practice for the Spanish by the 1520s. In 1528, Charles V struck another deal with German financiers, this time the Welsers, wherein he handed over the exclusive rights to explore and colonize Venezuela.²⁷⁴ Such bargains kept the ceded territories loosely within Spain's orbit but spared the state nearly all of the expense. This practice would prove to be the basis by which New Spain was made stewards of the Philippines in the latter half of the sixteenth century and how the monarchs of Castile came to forge a global empire.

Garcia Jofre Loáisa was to command the first of these follow up voyages with a fleet far larger and better supplied than Magellan's. Loaisa had at his command seven ships, the largest of which was 360 tons—that is 250 tons larger than the biggest of Magellan's vessels. Loáisa's total fleet came to 1,212 tons, which was more than twice the size of the first *Armada de Molucca* (but not even equal to one Manila Galleon later in the century).²⁷⁵ And where the first Armada comprised some 280 crewmen, Loáisa's expedition totaled some 450 men. The cost of organizing such a large force was staggering. The Fuggers put 10,000 gold ducats into the venture with a further 1,250,000 *maravedis* from de Haro's own pocket.²⁷⁶ Loáisa's fleet, which was to set sail for the Moluccas in 1525, was only the first phase of a much greater commitment to Pacific exploration. Following Loáisa would be a third *Aramada de Molucca* led by the vastly experienced English pilot and cartographer Sebastian Cabot. It was hoped that Cabot would rendezvous with Loáisa's men and provide vital support once in Asia. And by the time of

²⁷³ For an analysis of the mixing of private and public funding within European states, especially for the purposes of empire and maritime endeavors, see Philip J. Stern, *The Company-State: Corporate Sovereignty and the Early Modern Foundations of the British Empire in India* (New York: Oxford University Press, 2011).

²⁷⁴ Kamen, 84; Roger B. Merriman, *The Rise of the Spanish Empire in the Old World and in the New*, vol. 3 (New York: 1918), 536.

²⁷⁵ Noone, 119.

²⁷⁶ Noone, 115.

Loaísa's departure there were plans for a fourth *Armada de Mohucca* to be led by Diego Garcia and slated to depart sometime soon after Cabot's fleet set sail. Garcia's fleet would make for South America and hope to discover a new passage through South America (which by the time of his departure was known as the Doubtful Strait), a passage that would hopefully be more northerly and more easily navigable than the treacherous and remote Straits of Magellan. Already by the time of Loaísa's voyage it was recognized that the Strait of Magellan was too dangerous and distant to be an effective link between the Atlantic and Pacific.

Little is known regarding Loaísa's seven ships. Being acutely aware of the task before them, each ship was fully stocked and brought as close to perfect condition as possible. Three survivors of the Magellan's fleet were enlisted into the Second Armada, including Sebastian del Cano, who was given the position of second-in-command. The fleet departed Coruña on 17 July, 1525 with a careful plan to avoid the many setbacks experienced by Magellan.²⁷⁷ The fleet was to arrive on the South American coast at the very height of the summer, thus making navigation to the straight quicker and safer without the need to winter in a harbor as Magellan had done. There was also a plan to avoid the separation of the fleet. All the fleet's vessels were to reunite at All Saint's Bay just short of the Strait before pressing on into the Pacific. With all the foreknowledge gained from Magellan's hardships it was hoped that the attrition and suffering experienced the first time around could largely be mitigated, if not completely avoided. Despite these many precautions however, the second voyage to the Moluccas would prove too much for Loaísa's great fleet to endure—every one of Loaísa's seven vessels were lost or destroyed and

²⁷⁷ See Fermin Uncilla Y Arroitauregui O. S. A., *Urdaneta y Conquista de Filipinas* (San Sebastian, 1907).

his crewmen found themselves to be just as dependent upon local Southeast Asians for their survival as Magellan's crew before them.²⁷⁸

Only four days out from the Canary Islands the mainmast of the flagship *Victoria* was torn off in a heavy wind. While repairs were being conducted at sea by the fleet's carpenters, the 360-ton *Victoria* rammed into the *Parral*, severely damaging the small vessel. Thankfully, repairs were completed en route and the fleet was able to keep to schedule, reaching Rio de Janeiro in early December 1525. Rather than stop, Loáisa utilized the calmer weather of the southern hemisphere's summer months and made directly south for the *Mar del Sur*, exactly as planned. It was during the voyage south to the strait however that Loáisa and the flagship *Victoria* became separated from the main fleet. After days of searching for the expedition's leader, the second officer, del Cano, directed the remaining ships to make for All Saints Bay. The fleet arrived on 12 January, 1526 to find that not only was Loáisa and the *Victoria* still missing, but the *San Gabriel* was now also unaccounted for. Del Cano then had the tough decision to either waste the summer months waiting for the remaining vessels to turn up, or to utilize the good weather and make for the Strait of Magellan directly. Choosing the latter option, the fleet sailed on and reached the Cape of Eleven Thousand Virgins on January 14, 1526. That night, with the fleet anchored at the cape, a powerful gale pushed del Cano's *Santi-Espiritus* into the rocky shore. The 240-ton vessel was smashed to pieces. Fortunes turned however when Loáisa and the missing vessels turned up at the strait. Back to full strength, minus the *Santi-Espiritus*, the fleet entered the strait in February.

²⁷⁸ The Flagship *Victoria* was 360 tons, the *Santi-Espiritus* 240 tons, the *Anunciada* 204 tons, the *San Gabriel* 156 tons, the *Parral* 96 tons, the *San Lesmes* 96 tons, and the small pinnace *Santiago* was 60 tons.

Summer months or no, the weather at the passage to the Pacific Ocean is unpredictable and capable of great destruction. In the course of navigating the straight the *Victoria* ran aground and required extensive repairs. The captain of the *Annunciada*, in the face of torrid weather and sensing the mission was now hopeless, turned his vessel around and attempted to reach the Moluccas via the Cape of Good Hope. The *Annunciada* was never seen again. The *San Gabriel*, rather than attempt a voyage around the Cape of Good Hope deserted the expedition all together and made for Spain. The remaining vessels retreated to Santa Cruz Bay for repairs. It was not until late March that the fleet was ready to attempt a second crossing of the Strait. After months in the Strait and many deaths due to freezing weather and sickness the *Victoria*—which was now leaking heavily—the *Parral*, the *San Lesmes*, and the *Santiago* entered the Pacific Ocean on May 25, 1526, ten months after having left Spain. This would mark the last time that a Spanish fleet would cross the Atlantic and Straits of Magellan for the purposes of trans-Pacific navigation for over a hundred years. It was by now clear that the distance and risks were too great.

Unfortunately Loáisa's troubles were not nearly over. Less than a month into the Pacific leg of the voyage a fierce storm²⁷⁹ engulfed the fleet and separated the four vessels. Loáisa and his flagship *Victoria* were never reunited with any of the other three vessels again. At this point, in the midst of the Pacific, most all aboard the *Victoria* were slowly dying, as is made clear in the tragic succession of fleet commanders. Loáisa passed away in late July, giving command to Sebastian del Cano. The experienced circumnavigator died one week later, which gave command of the *Victoria* to Alonso de Salazar, simply because he was the highest-ranking officer alive. It

²⁷⁹ Andrés de Urdaneta considered the changing wind directions, the severity of the storm, and its size, and concluded that it was likely a typhoon. Urdaneta served for almost a decade in Southeast Asia following Loáisa's doomed voyage and would become well acquainted with typhoons. See Noone, 132.

was after a respite on the island of Guam that Salazar too died. All told, over thirty crewmen passed away during the Pacific crossing, mainly from scurvy and other complications of malnutrition. By the time the battered *Victoria* and her starving crew reached the Spice Islands in October 1526—after some fifteen months at sea—the expedition had simply exhausted itself. The crew, now numbering only about one hundred men, had devolved into a leaderless clan of competing factions. The sole remaining vessel was fairing no better. The poor condition of the *Victoria* was fully revealed upon encountering a Portuguese vessel off the coast of Tidore, just days after their arrival in the region. After firing her guns at the enemy vessel the recoil of her own shots was enough to rip the *Victoria* apart at its seams.

The Spanish were stranded in the Moluccas with a handful of native allies and the much better supplied Portuguese force barring down with their own native allies from Ternate. With no way to return to Spain, the surviving crew of the *Victoria*, with the aid of native Tidorans, began constructing a makeshift fortress out of timber, mud, and coral. The *Victoria* was disassembled and her cannons placed ashore as defenses. There can be no mistaking the fact that it was the Spanish alliance with the natives of Tidore and Gilolo that kept Loáísa's crew alive. The Sultan of Gilolo furnished the Spaniards with food, and in exchange the Spaniards aided the Giloloans in their war with the Portuguese and Ternate.²⁸⁰ Here then the Spaniards in truth had become servants to the local Asian polities and powerbrokers, having nowhere near enough authority to enforce their own agenda.

²⁸⁰ After assisting the Spanish in fending off the Portuguese from their new fortress on Tidore, the sultan of Gilolo requested 20 to 30 Spanish soldiers aid in the defense of his own territory, which he anticipated would be attacked by the Portuguese. As payment, the sultan of Gilolo furnished the new Spanish outpost with five praus full of food and a cache of copper coins. Noone, 147.

During their time in the Spice Islands two new vessels were constructed, one for a return voyage to New Spain and one to patrol the contested waters of the Spice Islands. For this project the Spaniards were furnished with carpenters and timber from Gilolo.

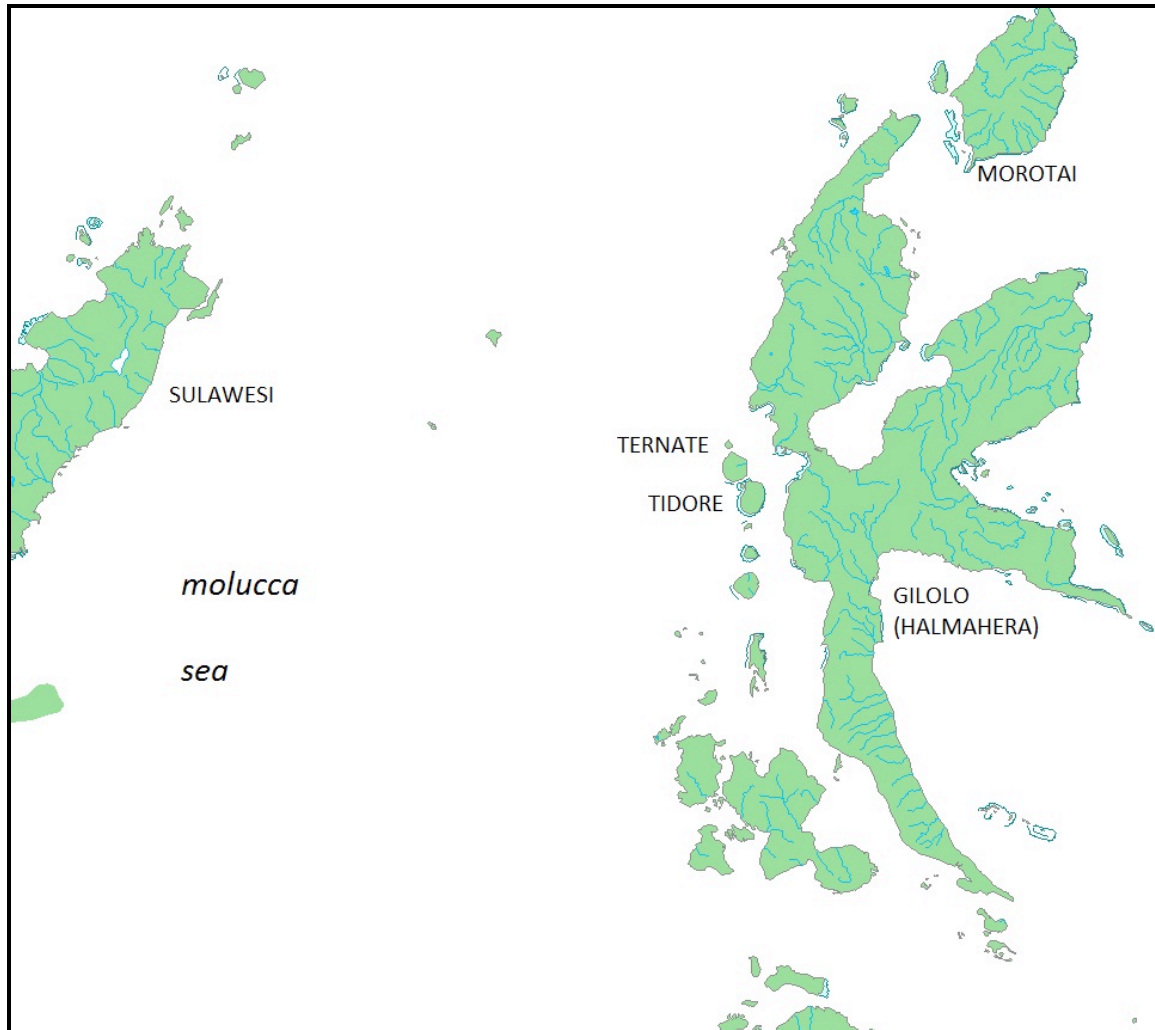


Figure 3. The Spice Islands (Moluccas)

One vessel was made entirely from scratch while the second vessel was fashioned from the remaining components and timber from the *Victoria*. By the end of 1527 both vessels were completed and the results foretold the importance of local Southeast Asian carpenters and building materials. According to Andrés de Urdaneta, the ship that was constructed using native

timber and labor had “turned out to be a very good ship.”²⁸¹ Here then we have an early example of syncretism in shipbuilding, a process that would become much more fully developed later in the century at Manila. However, it must be said that the vessel built for a return across the Pacific using the remaining framework of the *Victoria* proved completely useless as shipworms and rot had wholly destroyed the European timber. Their only vessel then, though freshly built and perfectly seaworthy, was too small for a Pacific voyage and would barely prove useful in defending their fledgling outpost on Tidore from the Portuguese. A return to Spain was out of the question for Loáísa’s men.

The Third *Armada de Molucca* set out from Coruña in 1526, one year after the departure of Loáísa. With no knowledge of the disasters that befell the advanced fleet, Sebastian Cabot’s three vessels were to make for the Straits and follow in Loáísa’s wake across the Pacific. While Cabot’s instructions were a virtual word-for-word copy of those given to Loáísa, he and his men were to be under the command of Loáísa once their small support fleet arrived in Southeast Asia. While each of Cabot’s three ships were over one hundred tons, he felt the need to bolster his forces by allowing a privately owned vessel to accompany the fleet as an unofficial fourth ship. Additionally, Cabot brought along a surviving crewmember from Magellan’s fleet, Martin Ménendez, as an assistant commander. As was the case with the Loáísa and Magellan expeditions, disaster struck before the fleet had even reached the Pacific. Antonio de Herrera’s history of the voyage as well as the assembled primary source accounts reveal that faith in the English Captain-General was lost very quickly, primarily due to an unorthodox route across the Pacific which saw the fleet nearly wrecked off the African coast. Additionally, food rations were not guarded carefully and supplies ran low before they had even reached South America. The

²⁸¹ Noone, 152.

lowest point came when the flagship ran aground on Santa Catalina Island off the Coast of South America, completely destroying the ship.²⁸² Whether it was out of fear of the long voyage ahead or if the Captain-General simply felt his situation was hopeless, the decision was made to abandon the voyage to the Pacific and to instead pursue rumors of silver deposits in the River Plate.

For four years Cabot and his men searched the Plate estuary and the Paraná River. It was here that Cabot encountered the fourth *Armada de Molucca* sent by Spain and Christopher de Haro, the fleet of Diego Garcia. Garcia had his own orders to reconnoiter the South American coastline and the River Plate for a shorter passageway into the Pacific Ocean and through to the Spice Islands. What a surprise then for Garcia to find his predecessor not in the Moluccas but encroaching on his own mission's objectives. Cabot and his men found nothing of value and Garcia found no passage into the Pacific. Neither wished to risk a voyage through the straits of Magellan and therefore both expeditions eventually returned to Spain with nothing to show for their efforts in South America. Though guilty of incompetence and disobedience, Sebastian Cabot was never punished on account of his influence at court. The experiences of both Cabot and Garcia are indicative of how quickly the Straits of Magellan had become regarded as dangerous, inconvenient, and an impractical means to reach the Pacific, particularly after the hardships suffered by Magellan's and Loáísa's fleets. Indeed, all future Spanish efforts and crossing the Pacific Ocean in the sixteenth century avoided the Straits altogether. The Atlantic, for all intents and purposes, was no longer a means to reach Asia and the future development of trans-Pacific commerce was to develop more or less independently from the Atlantic trading zone.

²⁸² This wreck occurred at roughly 27° S latitude.

Conclusion

The failures experienced by the first four Pacific voyages have been considered here because they led directly to a number of wholesale policy changes necessary to the future development of sustainable trans-Pacific trade. Upon the breakdown of the fourth and final *Aramada de Molucca* led by Garcia and his failure to find an alternate route into the Pacific, the Spanish Crown cut funding to the short-lived House of Spice in Coruña.²⁸³ Seeing no financially viable way to reach the Far East, all attempts at reaching Asia from Spain were terminated for a period of two and a half centuries. However, at the same time the House of Spices was closing its doors, the Spanish Crown granted permission for private individuals in New Spain to finance and organize their own expeditions to the Far East. These new measures allowed for a new frontier in maritime exploration to develop along the Pacific coast of the New World. Equally as momentous was the signing of the Treaty of Zaragoza in 1529, wherein the Spanish crown, realizing that the Moluccas were simply too far away to wrest away from the Portuguese, relinquished all claims over the Spice Islands to their Iberian rivals.²⁸⁴ Removing the chimera of the Spice Islands from the Spanish imperial agenda was a difficult decision, but one that had tremendous consequences for the future of trans-Pacific voyaging as it ultimately shifted the focus of Spain's imperial designs to China and the Philippine archipelago.

²⁸³ Spain's participation in the spice trade and botanical research has largely been overlooked. See De Vos, "The Science of Spices: Empiricism and Economic Botany in the Early Spanish Empire," *Journal of World History* 17 (2006): 399 – 427.

²⁸⁴ Following the failure of the Badajoz and Elvas conferences to resolve the issue of ownership of the Moluccas, the Treaty of Zaragoza was signed (5 April 1529), wherein King Charles V relinquished all claims to the Spice Islands in exchange for a payment of 350,000 ducats from King João of Portugal. See O. H. K. Spate, *The Spanish Lake* (Minneapolis: University of Minnesota Press, 1979): 94 – 95.

While the impact of these developments will be explored in the next chapter, for now it is important to note that these changes in policy were brought about only after the series of disastrous and costly voyages of Magellan, Loaísa, Cabot, and Garcia. What is more, we can take the cases of these four expeditions as demonstrations of Spain's limited maritime reach in the early sixteenth century and the complex nature of shipbuilding in the early modern era. While the New World was firmly in Spain's grasp, it became apparent after these four expeditions that to bring the Pacific into Seville's orbit would require vessels of tremendous durability as well as supply bases and shipyards in the Pacific for logistical support. The shipbuilding industry in Northern Spain, which was amongst the best in Europe, was simply not capable of producing vessels able to withstand such a long and punishing voyage. Spain's monarchs would thus need to allow for drastic changes to their current system of overseas conquest/exploration/commerce if they were to extend any measure of influence into Asian waters.

CHAPTER 3

By Way of New Spain: Shipbuilding in Mexico and the Failures of Saavedra, Villalobos, and Grijalva

...the port on the South Sea where these ships are building, is two hundred leagues, and even more, from the ports on the North Sea where all material which arrives in this New Spain is delivered, and there are very steep mountain passes in some parts, and in others great rivers, over which everything required for the said ships must be carried, as nothing can be obtained elsewhere. Another thing also happened, which was that when I had got together the sails, cordage, nails, anchors, tar, tallow, tow, bitumen, oil, and everything else required, and stored them in a house in that port, it took fire and everything was burned, except the anchors, which could not burn.

Hernán Cortés to Charles V, 1522

Emperor Charles V's decision to allow trans-Pacific voyages to be organized and outfitted in the New World starting in the late 1520s was made reluctantly but out of practical necessity. This change in policy was a direct response to the unsuccessful voyages of Loaísa, Cabot, and Garcia, which together demonstrated that the distance between Seville and Asia was far too great to manage and the circumnavigation made by the *Victoria* was not likely to be repeated. Shifting the departure point for Pacific expeditions from Spain to New Spain would prove to have profound implications on the nature of Spain's operations in the Asia-Pacific region and would ultimately make possible the future development of the Manila-Acapulco galleon trade. By

allowing the merchants, mariners, and colonial officials of New Spain to participate in Pacific commerce, The House of Trade, The House of Spice, the Spanish government, and the bankers of Europe were effectively giving up control of what could have potentially been a wildly lucrative spice trade. The viceroyalty of New Spain stood to gain everything.²⁸⁵ From this point forward, Mexico City would be the locus of power in the Pacific, not Seville, Valladolid, or Madrid. As Catherine Bjork argues, once a link was established with the Philippines it was “Mexican merchants and colonial officials [that] were central to maintaining the trade with the Philippines.”²⁸⁶ Spain’s agents in the New World were to become the chief stewards of the Philippines. While Charles V likely knew the potential economic boons he was giving up in 1527 by allowing the viceroyalty of New Spain to take over Pacific voyaging, he certainly could not have had any inclination of how Spain’s future trade with Asia was to be impacted by this decision.

Potential future losses aside, by 1526 the monarch of Spain was desperate to generate results in East and Southeast Asia by any means. As was illustrated in the previous chapter, Spain’s first four voyages to Asia had been a string of disasters with accumulated losses running into the tens of millions of *maravedis* and there was only a single cargo of spices to show for it all. Only two expeditions had actually ventured into the Pacific while Cabot and Garcia’s abortive missions succeeded only in establishing that there was likely no other way around or through the Americas besides the treacherous Strait of Magellan. While the merchants and mariners of Spain were only just coming to realize the extent of the physical space between Seville and the Moluccas, Portuguese seamen had gained control of numerous harbors

²⁸⁵ Bjork, 25 – 50.

²⁸⁶ Bjork, 26.

throughout South and Southeast Asia with relative ease, including the all-important Straits of Malacca. Indeed, by mid-century there was a Portuguese factor established at most every major port from the African Cape to Macao. In Asia the Portuguese could rely on any number of ports for supplies, trade goods, crewmen, and repairs. Spain, in stark contrast, was still struggling to come to grips with the vast and desolate Pacific, which was largely void of any such amenities or ports that could sustain weary trans-oceanic voyagers. So it would seem that where the Treaty of Tordesillas gifted Spain the American continents, at the same time it prohibited easy access to Asia.²⁸⁷

There appear to have been two specific advantages Spain expected to gain by moving Pacific operations from Seville to the western coast of New Spain. Firstly, it was hoped that mariners would be able to reach Southeast Asia more quickly and with far less attrition suffered by crewmen and vessels. It is a geographic fact that by departing from the ports of Tehuantepec or Huatulco the voyaging distance to Asia was cut by more than half of what Magellan and Loaísa had faced. Secondly, the Spanish government and the major banking houses of Europe were no longer willing to contribute such great sums of money to such an apparently futile venture as sailing westward to Asia, particularly after so many costly failures and with so much else going on in Europe. This move to New Spain thus marked a transition not just away from the European continent, but a move away from the familiar financial support systems of established states and respected banking houses. The decision of 1526/1527 saw the Spanish crown effectively pass off the burden of financing Asian voyages to independently wealthy subjects in the New World, subjects like Hernán Cortés and Antonio de Mendoza, who were more than willing to spare no expense in the hopes to creating their own personal empires in the

²⁸⁷ Subramanham.

Mar del Sur. By allowing these changes, it was hoped that Spain's men of the sea could at long last begin to make real territorial and commercial gains in Asia while at the same time sparing the Spanish government all the expenses, if losing direct control in the process.

Despite these well-intended changes in policy, the first three voyages to depart New Spain for Southeast Asia were complete failures. Taken together, the voyages of Álvaro Saavedra Cerón (1527), Ruy López Villalobos (1542), as well as that of the ill-prepared Hernando de Grijalva (1537), led ten ships and over 500 crewmen across the Pacific and yet not one of their vessels managed to return.²⁸⁸ With the issue of distance partially ameliorated, the reason behind Spain's continued failure in the Pacific is to be found in the environment and infrastructure of New Spain in the early 1500s. The quality and availability of labor, supplies, and building materials in western New Spain will be of central importance in this analysis. The Pacific coast of the New World in the sixteenth century lacked most everything needed to produce durable oceangoing vessels. Establishing shipyards in western Mexico proved to be exceptionally difficult, costly, and time consuming for the wealthy conquistadores of the Americas who paid dearly for imported labor and resources. The materials that were locally available were sparse and of poor quality, therefore many of the needed materials had to be brought in from Europe at tremendous cost. A shortage of skilled labor only added to the already high costs of construction. It should come as no surprise that the end product ultimately proved to be inferior vessels that were in most cases unfit for trans-oceanic navigation. This is all to say that

²⁸⁸ There were a handful of other attempts made at reaching Asia from the western shores of the Americas in the sixteenth century. For example, Álvaro Mendaña y Neira led two ships out from Peru in 1567 with the hopes of reaching as far as the Solomon Islands. Such voyages are not discussed here as they were not formally organized expeditions but were half-hearted affairs, and their experiences reveal nothing new or noteworthy. See *Mains 'l Haul: A Journal of Pacific Maritime History* 38 no. 1 & 2 "The Manila Galleons: And the Forging of the Pacific Rim," and Spate's *The Spanish Lake* for a number of discussions on the subject.

the Pacific coast of New Spain was not yet developed to the point at which the craft-industry of shipbuilding could establish itself and operate effectively. Productive shipyards did develop in the early sixteenth century in such places as Havana, Vera Cruz, Hispaniola, and, later in the century, Central America where timber was plentiful and well-suited to shipbuilding. The far-flung and isolated harbors of Navidad, Iztapa, Huatulco, and Acapulco, being situated on the very periphery of Spain's empire, were simply too far removed to adequately develop in the early sixteenth century and lacked the necessary resources to support trans-Pacific navigation.

Building Pacific Fleets in New Spain

The first attempts at shipbuilding along the western coast of the New World began almost as soon as Vasco Núñez de Balboa sighted and claimed the *Mar del Sur* for Spain. Hoping to explore the western coastline of the New World and cut out his own stake in the New World, Balboa oversaw the construction of four small brigantines in 1517.²⁸⁹ This marked the first time Europeans constructed vessels on the western shores of the New World.²⁹⁰ However, the construction of these first vessels demonstrated clearly the major obstacles that prevented the development of a viable shipbuilding industry in the region, obstacles that would beleaguer shipbuilding efforts along the western coast of the New World for much of the century.

Geography and a lack of local raw materials dictated that cordage, anchors, chains, pitch, sails, tar, nails, and all the other components essential to shipbuilding needed to be imported from

²⁸⁹ Brigantines will come to feature more and more in this discussion. With resources and manpower in short supply, brigantines were an attractive choice for Spanish mariners in the Pacific on account of their being small enough to be carried overland when necessary and the relative ease of their construction.

²⁹⁰ This was two years before Magellan set out from Seville.

Spain to the Atlantic side of the isthmus of Darién and hauled overland to the Pacific. The human costs of overland transport of these goods were extraordinary. In what is almost certainly an exaggeration, Bertolomé las Casas claimed that 2,000 native porters lost their lives while carrying goods for Balboa's four ships.²⁹¹ Indigenous porters would have labored for weeks to carry shipbuilding supplies from Alcá on the Caribbean side of the isthmus to the Rio de las Balsas on the Pacific side.²⁹² The use of native porters in Pacific shipbuilding could not be avoided however, and their use only increased after shipbuilding began to develop in more northerly ports, which required even longer and more grueling overland transport routes from the Atlantic. Making matters worse, the Pacific coast in the early sixteenth century was lacking the needed craftsmen, shipwrights, and pilots, which only added to the already high shipbuilding costs in the region. Pre-colonial oceangoing shipbuilding in the Americas was nowhere near the level of sophistication and development in pre-colonial Southeast Asia, thus there was far less pre-existing infrastructure and far fewer resources for Spaniards to exploit in the Americas for the purposes of shipbuilding. One must also consider the widespread epidemics that struck down such a large portion of indigenous society in the Americas, thus making labor far scarcer than what would later be made available in Manila.²⁹³ When all was said and done, Balboa had spent 50,000 ducats on his four small ships, which was equivalent to roughly 18.7 million

²⁹¹ Abuse and fatality amongst the porters were no doubt inevitable in such a grueling project. However, las Casas' claims should be thoroughly suspect. Las Casas' spirited defense of native rights was very much a part of his own ambitions to power in the region. By blaming figures such as Balboa and Pedrarias of excessive abuse, he hoped to sweep aside these opposition figures to make more room in the New World for himself and his own designs. See Kathleen Romoli, *Balboa of Darien: Discoverer of the Pacific* (New York: Doubleday, 1953), 334 – 339.

²⁹² Woodrow Borah, *Early Colonial Trade and Navigation between Mexico and Peru* (Berkeley: University of California Press, 1954), 2; Arthur Strawn, *Sails & Swords: Being the Golden Adventures of Balboa & his intrepid Company, Freebooters all, Discoverers of the Pacific* (New York: Brentano's Publishers, 1928), 268.

²⁹³ Newson.

maravedis.²⁹⁴ To muster so much specie, Balboa had hastily assembled what he called the South Sea Company, which was nothing more than a pool of investors in the New World who were friendly to Balboa and wished to share in the potential gains of sailing on the Mar del Sur.²⁹⁵ His enemies numbered far more than his allies however, and for his efforts Balboa was beheaded and his ships seized following a power struggle with Pedrarias Dávila. Such a fate was typical of ambitious upstarts in the early colonial history of New Spain. The more powerful faction of Dávila appropriated Balboa's ships and used them to their own ends.

Limited and inferior supplies of shipbuilding timber would beleaguer shipbuilding efforts along the Pacific coast of New Spain for decades and ultimately necessitate the utilization of the superior and far more abundant timbers of the Philippines. In the construction of Balboa's modest fleet in Darien we can see a foreshadowing of things to come in the Philippines.

Shipworms were one of the greatest enemies to European maritime navigation. *Torredos*, which inhabited the warm shallow waters of coastal New Spain as well as the Philippines, could render vessels wholly unseaworthy in a matter of months, turning hull planking to pulp. To combat this nearly microscopic enemy, shipbuilders turned to a number of preventative measures, none more effective than utilizing shipworm-resistant timbers for hull planking. In the course of building his small vessels Balboa acquired local knowledge from the indigenous of Darien that certain woods were naturally resistant to shipworm infestation.²⁹⁶ It would seem that these local woods were utilized as often as possible, but this did not negate the fact that so much else was lacking in the New World for efficient and economical shipbuilding. Nevertheless, Balboa's reliance upon both

²⁹⁴ Borah, 3. See also, Angel de Altolaguirre y Duvalé, *Vasco Núñez de Balboa* (Madrid, 1914).

²⁹⁵ Strawn, 265.

²⁹⁶ Strawn, 268. According to Strawn, it was a Cacique by the name of Careta who informed Balboa that "certain trees were of such bitter wood that worms did not attack them."

local knowledge and local materials for shipbuilding would be repeated in the early colonial Philippines, and to much greater effectiveness.

On the Pacific coast of the New World however, issues of overland transport, high labor and material costs, inferior craftsmanship, and political intrigue would continue to dog efforts at shipbuilding for much of the sixteenth century. While Balboa's efforts were noteworthy, they were also ill planned and hastily executed. It was not until the 1520s that large-scale shipbuilding efforts began in New Spain under the guidance and financial backing of one of the empire's most determined and wealthy subjects, Hernán Cortés. Almost immediately following his conquest of Tenochtitlan Cortés had petitioned King Charles V for permission to outfit his own expedition to Asia from the newly discovered Pacific coast of New Spain. Even after offering to build his own ships and to pay the extraordinary costs for the voyage himself, Cortés's initial offers fell on deaf ears. It was feared by the political and merchant elite of Spain that if Cortés were allowed to outfit his own venture to the Spice Islands that a lucrative spice trade might develop around the Viceroyalty of New Spain, thus diverting commerce away from Madrid and Seville. As such, authorization to dispatch ships from New Spain was not issued until Loáísa, Cabot, and Garcia had fully proven the futility of attempting to repeat Magellan's and del Cano's voyage of 1519 – 1522. After such a costly string of failures King Charles V had no other option but to allow Cortés to indulge himself. Cortés had his authorization to cross the Pacific in hand by the end of 1526, which contained instructions not only for a trans-Pacific fleet, but orders to continue the search for an alternate Pacific-Atlantic passage as well.²⁹⁷ Cortés was to build ships for patrolling north and south along the Pacific coast in the hopes of finding such a passage connecting the two

²⁹⁷ For more on the decision to allow Cortés's voyage, see "Cedula from the Emperor to Hernando Cortés," in Wright, *Voyages of Álvaro de Saavedra Cerón*, 71; Navarrete, 5: 440; Francisco López de Gómara, *Cortés: The Life of the Conqueror by his Secretary*, trans. Lesley Byrd Simpson (Berkeley: University of California Press, 1965), 386.

great oceans. At the same time he was to assemble a separate fleet for striking off across the *Mar del Sur*.²⁹⁸ The prospects of finding *el estrecho duvidoso* (the doubtful straight) that would allow easy passage though the Americas was becoming ever more a chimera, though numerous voyages kept up the search through the 1530s, of which Cortés played a leading role.²⁹⁹

Cortés, ever the restless subject, had begun constructing ships in the *Mar del Sur* four years prior to receiving authorization in anticipation of his King's wishes. Writing in a letter dated May 1522, almost immediately after reaching the Southern Sea, Cortés confessed to his king that "I have provided with so much diligence that, in one of the three places where I discovered the [South] Sea, two medium-sized caravels and two brigantines are being built: the caravels for the purpose of discovering, and the brigantines to follow the coast."³⁰⁰ For the construction of these first vessels Cortés had established a shipyard at Zacatula and hired forty laborers, including "ship-masters, ship-carpenters, wood-sawyers, blacksmiths, and seamen..."³⁰¹ Native *Indios* of the Americas, who were hastily trained in the ways of ship construction, supplemented the handful of European laborers. Shipbuilding however was unlike the various other crafts of the colonial New World; extensive training was required before Natives of the Americas or imported slaves could be made into shipyard laborers capable of producing large

²⁹⁸ "Charles V to Cortés," 26 June, 1523, in *Colección de documentos inéditos relativos al descubrimiento, conquista y organización de las antiguas posesiones españolas de América y Oceanía...* 42 volumes (Madrid: Real Academia de la Historia, 1864 – 1884), 23: 366 – 367. See also, Max L. Moorhead, "Hernán Cortés and the Tehuantepec Passage," *The Hispanic American Historical Review* 29 (August, 1949), 371.

²⁹⁹ Estaban Gomez commanded one such mission of exploration in 1524, hoping to find a way through into the Pacific along the Atlantic coastline of North America. Noone, *The Islands Saw It*, 115 – 117. As we will see below, Hernán Cortés dispatched four expeditions of his own during the 1530s in search of a passage though the Americas along the western shores of modern-day Mexico. Following Cortés, the Viceroy of New Spain, Antonio de Mendoza funded further efforts. Qutoe from Spate, 58.

³⁰⁰ Cortés, "Letter to Charles V," 15 May, 1522, in *Letters of Cortes*, 144. See also, Spate, 63.

³⁰¹ Cortés, *Letters of Cortés*, 144.

ocean going craft. The hugely inflated costs of labor and goods in the New World only made matters worse for the financiers of shipbuilding projects. There are countless letters complaining of the high costs of even the most basic goods and services. Alonso Morales, a tailor living in Puebla wrote in 1576 that laborers in any profession in Mexico generally made three to four times what was typically made working in Europe. Material goods were more costly as well. According to Morales, even basic items such as clothing sold for 400% their value in Europe.³⁰² Inflation of prices in the New World was so great that it was generally accepted that one *peso de oro* in Mexico was equivalent to one ducat in Europe.³⁰³

While high wages and high sale prices were a boon to many artisans and craftsmen, the financial backers that put together the first New World Pacific fleets were forced to spend tremendous amounts. Additionally, there were many materials and components Cortés was forced to have imported from Spain—these items included sailcloth, arms, nails, chains, anchors, and woodworking tools.³⁰⁴ Progress in construction was slow. Another report from Cortés dated October 1524 updated the King and described the many difficulties in shipbuilding on Spain’s New World frontier. The primary challenge proved to be geographical. Cortés writes:

I had begun to build four ships on the South Sea, and, as some time has passed since they were begun, it may seem to Your Royal Highness that I have been slow in finishing them; but I now give Your Sacred Majesty the cause, which is that the port on the South Sea where these ships are building, is two hundred leagues, and even more, from the ports on the North Sea where all the material which arrives in this New Spain is delivered, and there are very steep mountain passes in some parts, and in others great

³⁰² Letter of Alonso Morales, Puebla, Mexico, 20 February, 1576 in James Lockhart and Enrique Otte eds., *Letters and People of the Spanish Indies* (New York: Cambridge University Press, 1976), 117 – 118.

³⁰³ Lockhart and Otte, xiii.

³⁰⁴ “Cortés to Charles V,” 15 May, 1522, in *Letters of Cortes*, 144. See also, P. Gayangos, *Cartas de Relación de Fernando Cortés, sobre el descubrimiento y conquista de la Nueva España*, 90 - 94; Noone, 156.

rivers, over which everything required for the said ships must be carried, as nothing can be obtained elsewhere.³⁰⁵

The long distances involved in the overland transport of bulk items in the Americas constituted an exorbitant expense, even with unpaid native porters. This very same problem had dogged Balboa and would continue to complicate future attempts at Pacific shipbuilding in New Spain well into the late sixteenth century.

At this stage Cortés claimed to have invested a total of 8,000 pesos of gold in shipbuilding and expected the total to reach 10,000 by the time his first two caravels and brigantine were completed.³⁰⁶ In actuality, once his small trans-Pacific fleet was fully assembled and dispatched (a fleet of only 3 ships, the largest of which was only 50 tons), Cortés claimed to have spent a total 60,000 gold pesos on the venture. Of this total 10,000 gold pesos went to labor alone, which had to be paid at a remarkable rate of 3 gold pesos a day.³⁰⁷ Using the very lowest estimate for the value of *pesos de oro* in early sixteenth-century New Spain (and taking care to consider the fact that some amount of exaggeration was likely at work in Cortés's report to the king), we can reasonably estimate that Cortés's initial investment of 8,000 pesos was roughly equal to 2,400,000 *maravedis*, which is more than double what it cost to purchase Magellan's five ships just five years prior in Europe.³⁰⁸ The total cost of 60,000 pesos was equivalent to 18 million

³⁰⁵ "Cortés to Charles V," 15 October, 1524, in *Letters of Cortes*, 199 – 200.

³⁰⁶ A warehouse fire delayed construction early on, which added greatly to his costs and destroyed a great deal of tar, pitch, rope, and sailcloth.

³⁰⁷ Noone, 168; Hernán Cortés, 18 May, 1532, *An account made by His Excellency Hernando Cortes of the expenses incurred in the making of the armada in Nueva España for the discovery of the Spice Islands...* (Manila: National Trust for Historical and Cultural Preservation of the Philippines, 1990.)

³⁰⁸ The currencies used throughout this study do not take into consideration inflation over time. Currencies and costs are used only when making relative comparisons within specific periods. For currency equivalencies in sixteenth-century Spain and New Spain, see Paul E. Hoffman, *The Spanish Crown and the Defense of the Caribbean, 1535 – 1585: Precedent, Patrimonialism, and*

maravedis, which is a 200% rise in cost over Magellan’s total expenses, which included 5 ships of between 75 and 110 tons (keeping in mind that Cortés only built three ships at 30 – 50 tons size!) All of this is to demonstrate that in the early sixteenth century a number of factors came together in New Spain to make shipbuilding ineffective and prohibitively expensive. The distance from Europe, the environmental disadvantages of New Spain—which included both difficult terrain for overland transport as well as inferior timber supplies—and the underdeveloped economy/colonial infrastructure of New Spain all combined to make shipbuilding in the sixteenth century (at least for the construction of trans-Pacific vessels) nearly impossible.

In 1526, in the hopes of ameliorating some of these difficulties and costs, Cortés relocated his Pacific shipbuilding efforts to Tehuantepec. It was hoped that with the aid of the long Coatzacoalcos River, which required only 120 kilometers of overland transport for imported goods, ships could be built more quickly and more cheaply. “The harbor was only a poor roadstead,” writes the Pacific historian O. H. K. Spate of the new location, “but there were fine stands of ‘pines’, and gear could be brought from Spain via Vera Cruz and the Rio Coatzacoalcos...”³⁰⁹ The Coatzacoalcos was found to be an ideal transport route through Mexico,

Royal Parsimony (Louisiana State University, 1980); Henry R. Wagner, *Sir Francis Drake’s Voyage Around the World: Its Aims and Achievements* (1969), 507; C. H. Haring, “Ledgers of the Royal Treasurers in Spanish America in the Sixteenth Century,” *The Hispanic American Historical Review* 2 (1919): 173 – 187; Haring, “American Gold and Silver Production”; Lockhart and Otte eds., xiii.

<i>Peso de Oro Común</i>	300 maravedis	<i>Peso de Tipuzque</i>	272 maravedis
<i>Peso de Oro Mejor Común</i> .	350 maravedis	<i>Peso de ley perfecta</i>	450 maravedis
<i>Peso de Oro minas</i>	450 maravedis	<i>Ducat</i>	375 maravedis

³⁰⁹ Spate, 63. Besides the narrow isthmus at Daren, which was already found to lack a channel to the Pacific, the Rio Coatzacoalcos was Spain’s last best hope of finding a centrally located maritime passage through the Americas in the early 1520s. Before the sack to Tenochtitlan was even completed Cortés had dispatched Diego Ordaz and a small band of Spaniards with local guides to discover if there was indeed passage along the Coatzacoalcos into the Pacific.

navigable to within 20 leagues of the Pacific directly from the river mouth on the Caribbean side—the river mouth being just 100 miles south of Vera Cruz.³¹⁰ Thus, in an effort to establish cheap and quick overland transport, the town of Espiritu Santo was ostensibly founded at the mouth of the Coatzacoalcos in 1521 with Tehuantepec soon becoming the terminus along the Pacific coast.³¹¹ By the early 1530s materials for Cortés' shipbuilding efforts were freighted up the Coatzacoalcos as far as possible, at which point native porters hauled the supplies overland the rest of the distance. "Artillery, anchors, timber, spikes, rigging, ammunition, apothecary supplies, merchandise, and stores of sea-biscuit, wine, vinegar, olive oil, cheese, meat, and fish" all had to be imported from Spain via the Tehuantepec Passage.³¹² Some goods, however, could be supplied locally once *haciendas* became operational in the region. Many of the food items taken on voyages orchestrated by Cortés in the Pacific were from his own estates, for example.

Though the Tehuantepec Passage was the shortest possible route to the Pacific from Vera Cruz, it still proved to be too costly for shipbuilding purposes.³¹³ Perhaps the clearest demonstration of the high costs of shipbuilding on the far side of New Spain emerged when one of Cortés' newly built vessels, the *Concepción*, was lost in 1532 while exploring the northern Pacific coast of New Spain. Even with the utilization of the Tehuantepec Passage for the vessel's construction, Cortés complained to government officials that he should be compensated 12,000

³¹⁰ Spate, 63.

³¹¹ Moorhead, 371.

³¹² Moorhead, 373.

³¹³ Moorhead, 373. Simply transporting goods overland from the Caribbean to the Pacific coast had cost Cortés 1,000 *castellanos* by 1533, which was roughly equivalent to 485,000 maravedis. The value of a *castellano*, the standard gold coin of Castile prior to 1497, was equivalent to 480 to 490 maravedis. The *castellano* was replaced in 1497 by the ducat, which was valued at 375 maravedis. Haring, "American Gold and Silver Production," 435.

ducats (4.5 million *maravedis*) after the loss of the ship. This is an extraordinary sum for a single vessel of only 90 tons.³¹⁴

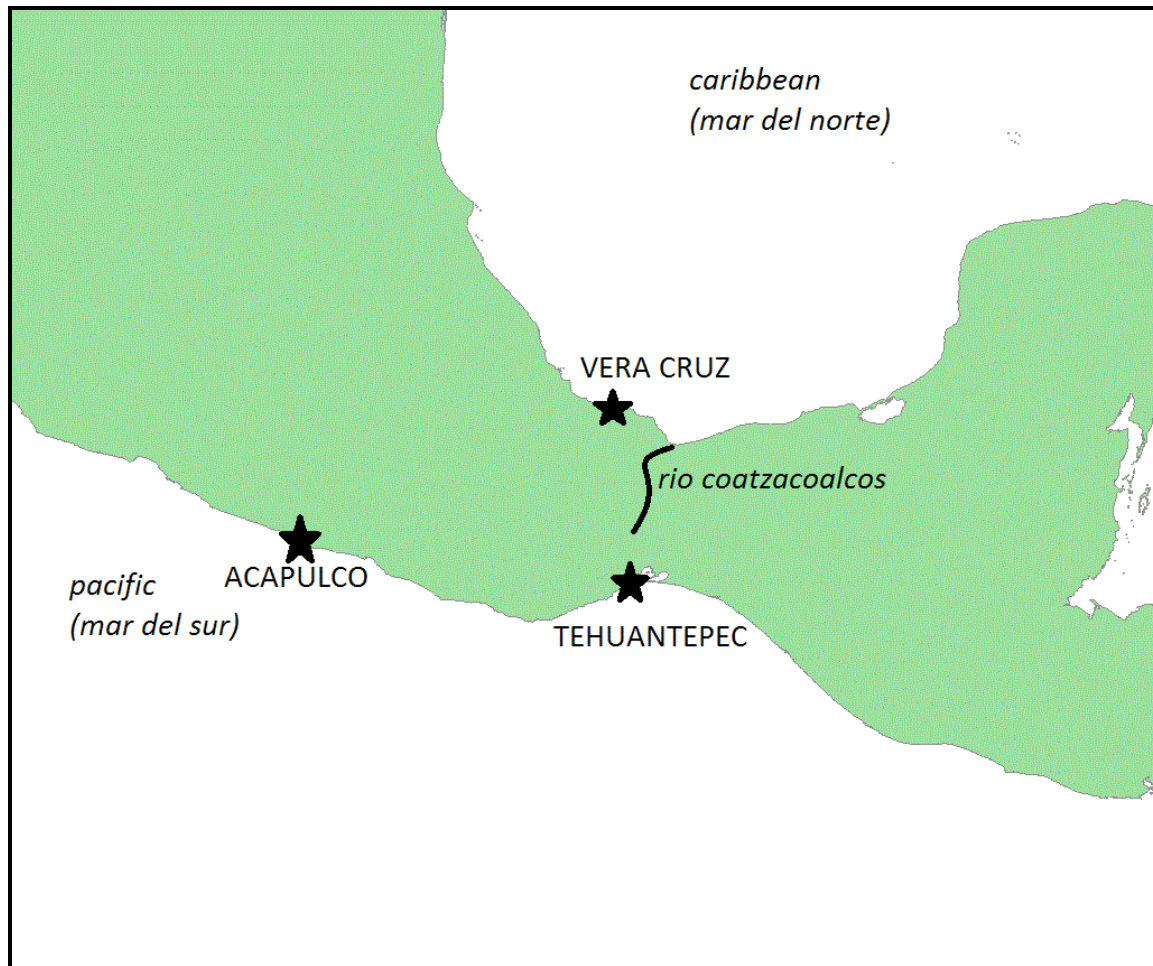


Figure 4. The Tehuantepec Passage

Despite these exorbitant costs however, Cortés had managed to produce enough vessels for one trans-Pacific expedition in 1527 and four coastal expeditions from 1532 to 1539. With money tight and production slow, each expedition was comprised of only two or three vessels

³¹⁴ Gómara, 399; Moorhead, 373.

and none of the vessels Cortés had built exceed 120 tons.³¹⁵ In terms of quality, it is sufficient to note that roughly half Cortés' vessels sank within a year of their completion. Of the first four ships completed in 1526, two sank before they were utilized in any capacity.³¹⁶ Of the three vessels Cortés had built for the trans-Pacific expedition of 1527—which sailed under the command of his kinsman Álvaro Saavedra Cerón—two sank just one month into the voyage with the third leaking badly only two weeks out from port. And of the four expeditions along the Pacific coast in the 1530s—one of which was led by Cortés personally—each was marred by shipwreck, though they had sailed only as far as Baja California in most cases. It would seem that while building ships in western New Spain was possible in the early sixteenth century, it was not yet an affordable or worthwhile endeavor.

By the late 1530s Cortés had nearly bankrupted himself in the quest for maritime control in the *Mar del Sur*. His trans-Pacific expedition, which was intended to establish a base in the Spice Islands and return a valuable cargo of clove and nutmeg to his estates had disappeared and never returned. Not only were vast sums of money lost on ship building, but each of Cortés' expeditions required soldiers, horses, food, skilled navigators, and much else. Bernal Díaz del Castillo wrote of Cortés' third and final voyage to Baja California, which was more or less an attempt at creating a colonial town from scratch, that included in the fleet were “three hundred and twenty persons, including the wives of thirty-four married soldiers...three smiths with their forges, two shipwrights with their tools...expert pilots and sailors...clergymen, physicians and

³¹⁵ For a concise summary of Cortés' expeditions in the Pacific see, H. W. Engstrand, “Seekers of the ‘Northern Mystery’: European Exploration of California and the Pacific,” *California History* 76 (1997): 78 – 110; Spate, 65 – 66. On the specific tonnage of Cortés' ships, see Moorhead, 373.

³¹⁶ Spate, 63.

surgeons with their pharmacy.”³¹⁷ Not surprisingly, Cortés’ correspondence from the period is laden with references to monies spent, monies owed to him, and debts he had incurred, most all of which pertained to shipbuilding and outfitting his numerous maritime expeditions. Cortés’ three voyages northward to Baja California had been total losses financially, as had been his 1527 trans-Pacific expedition across the Pacific, which we will see below. It should come as no surprise then that with so much lost already, Cortés’ second and final effort to cross the *Mar del Sur* was much less ambitious and was really a half-baked venture involving just a single vessel. In 1537 he dispatched two of his ships to Peru under the command of Hernando de Grijalva, aboard which were deliveries of arms, soldiers, food, and a number of presents for Francisco Pizarro, including silks, furs, armchairs and other various household furnishings.³¹⁸ Knowing Pizarro was in dire need of supplies in Peru, Cortés hoped that the financial return from the sale of his goods would be large and immediate. Much to his disappointment, in return for his efforts Cortés received only a promissory note for 4,005 *pesos de minas*, which was never paid.³¹⁹ This was only half the mission however. Of Grijalva’s ships, one returned to Cortés in New Spain with the IOU from Pizarro while the second made a desperate eastward trek across the Pacific, as per Cortés’ instructions. This mission, like all those that came before it, was a complete disaster. Grijalva was killed by his own starving crew somewhere near New Guinea and the vessel was never to return.³²⁰ By this point in time Cortés had run out of momentum on the *Mar del Sur*.

³¹⁷ Bernal Díaz del Castillo, *Historia verdadera de la conquista de la Nueva España*, ed. Genaro García, vol. 2 (Mexico: 1905), 415. See also, Robert Ryal Miller, “Cortés and the First Attempt to Colonize California,” *California Historical Quarterly* 53 (1974): 4 – 16.

³¹⁸ Borah, 13.

³¹⁹ Borah, 13.

³²⁰ At this point Cortés engaged in one last series of voyages geared towards generating money, this time by shipping his surpluses of food from his vast estates in Tehuantepec and Cuernavaca

Costs, geography, and inferior production quality were not the only obstacles standing in the way of Spain's success in the Pacific in the 1520s and 1530s. Political infighting and a prolonged power struggle between Cortés and the newly appointed Viceroy of New Spain, Antonio de Mendoza, brought about distractions sufficient enough to delay preparations for a second trans-Pacific expedition for a further sixteen years. Upon his appointment in April 1535, Charles V had granted Mendoza the power to explore the New World and Pacific with a free hand, thus giving the new Viceroy powers that conflicted directly with Cortés' interests.³²¹ In 1529 – 1530 Cortés returned to Spain to make amends with a royal court that had been growing dissatisfied with his actions. During his absence his American shipyards were stripped of their materials by his rivals and his small fleet of vessels was left to rot in shipworm-infested waters.³²² The newly established vicerealty seized much of Cortés remaining property and shut down his Tehuantepec shipyard completely in 1539. All the while, plans for a follow up voyage across the Pacific were left to languish, not to be revived until the political landscape stabilized somewhat.

to Panama, where it was hoped that market prices would be higher. This venture failed as well. The first vessel to make the run to Panama, the *San Vicente*, arrived in early 1539 with much of its cargo of biscuit, pork, flour, and sugar already spoiled. Making matters worse, the market in Panama was not what Cortés had expected and his agent was unable to sell much of anything. Two follow-up voyages were made later the same year with the same disappointing results. Borah, 17.

³²¹ Noone, 212 – 213. Indeed, the arrival of Mendoza brought about a power struggle (which his arrival may very well have been engineered to do) that ultimately ended Cortés' personal reign in the New World. Even before the arrival of the Viceroy Cortés had made enemies with the short-lived *audencia* in Mexico City, who were jealous and fearful of the conquistador's power and resources. Following the departure of Saavedra to the Spice Islands, the *audencia* cited Cortés' use of natives in his shipbuilding efforts—which violated the King's 1528 edict protecting indigenous peoples from forced labor—as just cause in removing the conquistador from power and sizing much of his property and wealth. The famed conquistador was forced to return to Spain and plead his case to the King in person.

³²² Moorhead, 377 – 378.

It was not until 1543 that a second fleet was dispatched across the Pacific, this time with the combined financial backing of Viceroy Mendoza and the wealthy conquistador Pedro de Alvarado, the governor of Guatemala. Alvarado, a participant in the conquest of Tenochtitlan and former lieutenant of Cortés, owned vast estates, held high office, and had at his disposal the necessary power and connections to fill the void left by his former commander. Most importantly, Alvarado had the means to invest heavily in shipbuilding and in the recruiting of laborers and crewmen for his own personal ends. He was able to draw upon resources from his lands in Honduras and Guatemala to begin launching ships into the *Mar del Sur*. Alvarado first launched a half-hearted attempt at involving himself in Pizarro's conquest of the Inca, much as Cortés had done. Upon arriving in Puerto Viejo in 1534 with three ships and 450 men, Alvarado found himself bullied away by one of Pizarro's lieutenants. Before making his retreat however, Alvarado capitalized where he could and sold his three ships and the services of his soldiers to Pizarro for 100,000 gold pesos, but not without extensive complaints to Charles V regarding Pizarro's behavior.³²³ Where this foray to the Andes region was somewhat hasty and ill-planned, Alvarado had his ultimate sights set on a thoroughly funded and well prepared trans-Pacific Armada that would at long last establish a viable colonial base in Asia for the Spanish crown (or more accurately, for himself.) This expedition was to be the best funded and best prepared yet to be launched across the Pacific by anyone.

Considering the environment and geography, Alvarado was much better situated for shipbuilding from his base in Guatemala than Cortés had been in New Spain. While the port of Iztapa still had the problem of overland transport for those goods imported from Spain, it had a tremendous advantage in the great supply of local hardwoods for ship construction, as well as

³²³ "Pedro de Alvarado to Charles V," 18 January, 1534, in John Eoghan Kelly, *Pedro de Alvarado, Conquistador* (London: Kennikat Press, 1971), 249 – 253.

nearby sources of pitch and fibers for rope making.³²⁴ Generally speaking, resources for shipbuilding were not as scarce in the more tropical regions of southern Mexico, Honduras, Guatemala, and Nicaragua as they were in the more northerly ports like Acapulco and Navidad. Where Cortés had managed to produce only nine vessels by 1538—none much bigger than 100 tons—Alvarado had by 1540 some thirteen vessels constructed, the largest being the 200-ton *Santiago*.³²⁵ Furthermore, whereas Cortés’ vessels had been smaller and more nimble brigantines and caravels, Alvarado’s vessels were proper *naos*—boarder in the beam, more stable on the open sea, and requiring a great deal more resources to build.³²⁶ However, building vessels in Iztapa proved to be no less costly an enterprise than in Tehuantepec. Bernal Diaz de Castillo reported that so great was the cost of Alvarado’s thirteen vessels that eighty vessels of similar size could have been built in Europe for the same price.³²⁷ It should be no wonder then that Alvarado seems to have suffered the same financial drain as Cortés. “The riches of Peru did not suffice,” writes Castillo, “nor the gold he had mined in Guatemala, nor the tax on the towns, nor the contributions from his relatives and friends, nor money from the money lenders...”³²⁸

Alvarado had bankrupted himself, confessing to his king in 1534 that,

I have spent all that I possessed in this enterprise and am now in debt for very large amounts...I have been forced to maintain the fleet and expedition at a cost as great as that of the construction of the fleet and since in the construction I spent all my capital and became indebted for fifty thousand gold pesos, now I have spent more than one hundred and thirty thousand as set forth in the accounts which I enclose...³²⁹

³²⁴ Spate, 64.

³²⁵ André Gschaedler, “Mexico and the Pacific, 1540 – 1565: The Voyage of Villalobos and Legazpi and the Preparations Made for Them,” (Ph.D. dissertation, Columbia University, 1954), 40.

³²⁶ Gschaedler, 49.

³²⁷ Kelly, 209; Díaz del Castillo, “Verdadera Relacion.”; Noone, 212.

³²⁸ Díaz del Castillo, “Verdadera Relacion.”; Noone, 212.

³²⁹ “Pedro de Alvarado to Charles V,” Port of Possession, 18 January, 1534, in Kelly, 249.

By this point Alvarado's frustration with shipbuilding in the New World had grown considerably. So great was the difficulty and cost of building ships that Alvarado wrote to Charles V, shortly after his misconceived foray into Peru, that building ships in New Spain was a lost cause and that efforts at reaching Asia from Seville should be revived.

...the ships that can be made here [the Americas] are neither very large nor strong and the timbers are not as durable as those of Spain and principally because the torredos of the warm water here attack and ruin the timbers of the ships in a short time so that they fail when most needed. ...it appears to me at the outset that we should consider a very much larger fleet constructed in Spain. Six or seven large ships well equipped with artillery, supplies, sailors and food for many days and there should be at least seven hundred soldiers on them and these should be brought by their captain through the Strait of Magellan until they reach some island or mainland on the other side of the Isles of Spice.³³⁰

Alvarado went on to offer his services in such a venture and proposed his return to Spain to help begin planning another European-based Pacific fleet. The monarch was unwilling to restart a venture that had already failed on multiple occasions and Alvarado was forced to try to cross the Pacific from New Spain.

To meet the exorbitant costs of such a task, Alvarado found it necessary to seek out a backing partner for his Pacific venture. To this end he made an alliance with the viceroy of New Spain, Antonio de Mendoza. Following a meeting between the two in 1540, it was agreed that they would collaborate to reach Asia. This agreement was made not just to save Alvarado a great deal of money, but to also avoid any potential conflict with the office of the viceroy similar to that which had played a part in ruining Cortés. Let us not forget that by this point the office of viceroy had been given exclusive jurisdiction over trans-Pacific ventures. To divide the extraordinary costs of preparing the fleet it was agreed that Mendoza would provide the most costly items necessary for shipbuilding, using his connections in Europe to secure imports of

³³⁰ "Pedro de Alvarado to Charles V," Guatemala, 12 May, 1535, in Kelly, 262 – 263.

anchors, cannons, sails and any other items that would again have to be hauled overland from Vera Cruz to the western shores of New Spain. Meanwhile, Alvarado, who already had a head start on shipbuilding from his base in Guatemala was to expand on his local shipbuilding network, securing the needed timber, shipwrights, and other locally available materials.³³¹ It was decided that with enough resources two fleets should be produced, one for exploration directly westward across the *Mar del Sur*, and another to explore north along the Pacific coast of New Spain, which, God willing, would round the northern edge of the Pacific as far as China.

Alvarado wrote to Charles V following this collaborative decision:

The Viceroy and I felt it would be advisable, in your Majesty's interest, to divide the ships into two fleets—for we have sufficient to do so—and send one fleet to the Western Islands [The Philippines] to make an exploratory sweep round about in order to found out what their extent is; the other fleet to follow the coast of the continent and explore its entire length. So we are sending three big ships and a galliot, well equipped, well supplied with food, and a complement of three hundred men under the command of Ruy Lopez de Villalobos...³³²

Before these fleets could depart Alvarado died putting down an uprising in Guatemala. Mendoza acted quickly to assume full control of the project and reallocated resources so that six vessels with roughly 400 crewmen were devoted to the trans-Pacific fleet. Being a relative of the Viceroy, Ruy López Villalobos was selected as the fleet commander. At his disposal were the 200-ton *Santiago*, the smaller *naos San Jorge, San Juan de Letrán, San Antonio, and San Cristóval*, as well as the brigantine *San Martín*.³³³ Yet despite such extensive preparations and the tremendous resources at his command, the largest fleet yet to sail into the Pacific met total ruin in short order. His expedition, as will be shown below, wasted away after reaching the

³³¹ Noone, 214; Kelly, 211.

³³² Noone, 214 – 215. Quote translated from “Alvarado’s letter to Charles V,” 28 March, 1541, in *Colección de documentos indeditos relativos al descubrimiento, conquista y colonización de las posesiones Españolas en América y Oceanía*, tomo II, doc. 1.

³³³ Gschaedler, “Mexico and the Pacific,” 40.

Philippines. Villalobos failed to establish an amicable relationship with the native peoples he encountered. As such, he had no means to collect food or other needed supplies, nor was he able to utilize local labor on any meaningful scale. Without local aid Villalobos' ships rotted away and his crew starved, unable to find favorable winds or currents for a return voyage. By the mid-1540s, with three expeditions sent across the Pacific from Spain (Saavedra, Grijalva, and Villalobos) and nothing to show for the effort and expense it would be a further two decades before another attempt was made.

The Experiences of Saavedra, Villalobos and Grijalva

Now we turn to the experience of the trans-Pacific voyages themselves, each of which failed to achieve any major objectives and each of which failed to return a single vessel back to New Spain or Europe. Here we will concern ourselves with cataloging the reasons for Spain's continued failure to navigate the Asian-Pacific region as well as noting the cases of dependency upon local environments and peoples. Where the above section dealt with issues of supply, cost, and labor in New Spain, this section will address the issues of New Spain's Pacific fleets at sea and in Asian waters. Despite the emergence of a fledgling shipbuilding industry in New Spain, the vastness of the Pacific remained a major obstacle. Because of the smaller size and inferior durability of vessels produced in the New World versus those of Europe, Saavedra, Villalobos, and Grijalva still suffered fantastic attrition. Additionally, without any established port infrastructure to receive these expeditions in Asia, crewmen began to starve and ships quickly deteriorated beyond repair, just as they did with Magellan and Loáísa earlier in the century. The specific experiences of Saavedra and Villalobos examined here will better illustrate the

challenges still left to be overcome if Spain hoped to develop regular trans-Pacific commerce. Paramount of these challenges was the development of a secure harbor and colonial infrastructure for shipbuilding/repair within East or Southeast Asia, which would need to be built upon local Southeast Asian labor, knowledge, and materials.

After receiving his final instructions from King Charles V and Hernán Cortés, Saavedra departed the port of Zihuatanejo with three ships and 115 men at his command.³³⁴ Included in the king's instructions were orders for Cortés' men to establish a viable trade route between New Spain and the Moluccas. His flagship *Florida* was a meager 40 – 50 tons, while his two support vessels, the *Santiago* and the *Espíritu Santo* were in the range of 10 – 20 tons.³³⁵ Each of these ships had been constructed at Zacatula. The modest size of these vessels is a testament to the limited resources available at the time in New Spain and the lack of necessary infrastructure and skilled labor for shipbuilding. Saavedra's expedition suffered tremendously as a result. The inferior craftsmanship became a critical factor almost immediately following the fleet's departure. On 13 November, 1527, just fourteen days out from port, the *Florida* sprang a leak so great that men from all three ships worked the pumps every hour of the day to keep the flagship afloat.³³⁶ The situation was so grave that every non-essential piece of cargo was thrown

³³⁴ There are two surviving accounts of Saavedra's voyage. Firstly, there is the ship's log, which is a day-by-day account of the major events, the weather, and the distance covered. Second is the account of Vicente de Nápoles who completed his account of the voyage after his return to Madrid in 1534. Both documents have been translated and annotated in Wright, *Voyages of Álvaro de Saavedra Cerón*, and have been transcribed in the original Spanish in Navarrete. King Charles's instructions to Cortés made it clear that the primary objective of his trans-Pacific mission was to seek out the Loaisa and Cabot expeditions as well as any survivors of the *Trinidad* from the first *Armada de Molucca*. Such a mission objective, it was hoped, would give an excuse for Cortés' ships to voyage into what was now clearly Portuguese territory in and around the Spice Islands.

³³⁵ Wright, 14.

³³⁶ Álvaro de Saavedra Cerón, *Voyaging Account*, November 14. "On this day [14 November 1527] a large leak was discovered in the ship in which I was sailing [The *Florida*] under the

overboard, including thirty *quintales* of food rations.³³⁷ There was a turn for the worse on December 15 when a storm separated the fleet and both the *Santiago* and *Espíritu Santo* were never seen again.³³⁸ Now alone in the Pacific with a badly leaking hull and most of the fleet's supplies lost, Saavedra and his surviving crewmen pushed onwards reaching Guam at the end of December 1527. By this point, Saavedra was lacking skilled personnel in most every position. The captain notes in the ship's log that his crew had become so sparse that following the death of the ship's pilot he was forced to simply appoint "a good seaman" to the position who knew nothing "about computing latitude."³³⁹ Already they were in need of skilled personnel and they had not yet reached Asia. It is unknown exactly how many crewmen were aboard the *Florida* at this stage as Saavedra only noted the deaths of key crewmembers, among them the ship's surgeon and blacksmith, though it is most likely that the crew numbered fewer than seventy by this point.

The *Florida* reached Mindanao on 4 February, 1528. Despite the dire situation the crew found themselves in, this nevertheless marked the first time a vessel made a successful crossing of the Pacific from New Spain. Once in Southeast Asia Saavedra's men had opportunity to haul the leaking *Florida* along a beach and repair the hull planking as best they could. After repairing the *Florida* over the course of three weeks and taking on fresh supplies Saavedra and his

bread supply which was carried aft in the storage space in the stern, and in no way could it be stopped. I had to lighten the ship by throwing some of the bread into the sea, to the amount of thirty *quintales*, and some meat and other things. The leak was such that the ship was settling rapidly. During that night and day I had to pass men back and forth thirty times between the other ship and mine to help in getting rid of the water in the ship."

³³⁷ "Account of Álvaro de Saavedra Cerón," in Wright, 99; Navarrete, 5: 465.

³³⁸ Though the fate of the *Santiago* and *Espíritu Santo* is debated, historians have speculated that the two ships most likely ran aground somewhere in the jagged reefs of the northern Marshall Islands. See Wright, 21. Wright claims Gaspar Rico as the most likely final resting place of the two vessels.

³³⁹ "Account of Álvaro de Saavedra Ceron," in Wright, 101 – 102.

surviving crew set sail south for the final push to the Moluccas. On 25 February 1528, still not yet clear of Mindanao, Saavedra's men encountered a marooned Spaniard. He revealed himself to Sebastián de Puerta, formerly a member of Loáisa's crew aboard the *María del Parral*. De Puerta claimed to have been captured by natives after having gone ashore. During his time in captivity on Mindanao and Cebu he had learned many valuable pieces of information. He knew that his own ship, *Parral*, had been wrecked somewhere in the vicinity not long after his capture. He claimed also that another fleet—no doubt Magellan's—had arrived many years before Loáisa's whose few surviving crew—no doubt from the doomed *Trinidad*—had been enslaved and sold to Chinese traders.³⁴⁰ De Puerta also relayed to Saavedra that many natives of the region reported seeing other vessels of Loáisa's fleet en route to the Moluccas. This last bit of information was confirmed when Saavedra and his crew encountered two more marooned Spaniards from Loáisa's *María del Parral* after just three more days sailing south from Mindanao.³⁴¹ Information gathered during their five-month captivity on Mindanao had enabled them to corroborate what de Puerta had already told Saavedra: there were Spaniards—likely Loáisa's men—entrenched on the Spice Island of Tidore no more than 100 leagues to the south. With spirits raised, Saavedra set off with the intention of lending aid to their fellow countrymen stranded on Tidore. It was now March of 1528 and only thirty of Saavedra's original 115 crewmen were left alive.

In much the same fashion as Magellan and Loáisa's expeditions, Saavedra utilized local pilots and informants to find his way to the Spice Islands. Once at Tidore he successfully made contact with Loáisa's surviving band of Spaniards. Twenty-five Spaniards (among them a young

³⁴⁰ "Account of Álvaro de Saavedra Cerón," in Wright, 104-106.

³⁴¹ Noone, 175. Noone speculates that at this point Saavedra was at Pujada Bay.

Andrés de Urdaneta who would later prove instrumental in establishing the galleon trade route) were returning to Tidore from Gilolo when they spotted the *Florida*. It is indicative of Spain's standing in Southeast Asia in the early sixteenth century that the small band of Spaniards—stranded for a year without word from Spain—approached the *Florida* aboard *caracorás* provided by the local sultan. What is more, this ragtag band of men were not sailing under the Spanish flag, rather they had just been fighting for the Sultan of Gilolo. Nevertheless, both bands of Spaniards were no doubt happy to have made contact with one another. The marooned crewmen of Loáísa's fleet thus led the *Florida* to anchor at Tidore on 13 March 1528.³⁴² So it was that Saavedra and the *Florida* completed the outbound leg of their voyage and found success in uniting with the crewmen of previous expeditions. But how shocked and disappointed both parties must have been after their initial excitement. Saavedra had been hoping to find a thriving Spanish settlement stocked with men and supplies from both Loáísa's and Cabot's fleets. Instead, he found that only one out of Loáísa's seven ships had reached the Spice Islands and that Loáísa himself was dead. As for Cabot and his four ships, there was absolutely no trace. (Though Saavedra could not have possibly known, Cabot never made it beyond the Atlantic shores of South America.) Saavedra observed that the few surviving Spaniards on Tidore had disassembled their only remaining ship (the *Victoria*) in order to construct a modest fortification to defend themselves against the Portuguese, who were stationed on the adjacent island of Ternate. From the point of view of Loáísa's former crewmen—who numbered only a few dozen—the situation must have appeared even worse. After holding out for eighteen months against the Portuguese and with no contact with Spain or New Spain, there was little solace to be had from the meek reinforcements that Saavedra brought with him: one disintegrating ship of

³⁴² Wright, 38 - 41.

modest size and thirty hungry Spaniards. Departing from Mexico, while shortening the length of the voyage a great deal, ultimately made little difference when it came to starvation of crewmen and the deterioration of vessels as both Loáisa's crew and Saavedra's crew found themselves together in exactly the same situation.

While Saavedra's voyage marked the fifth attempt by Spain to establish a foothold in the Far East, the only tangible accomplishment to date was a mud and stick fort on the island of Tidore constructed from the ruins of Loáisa's flagship and staffed by a few dozen starving survivors of Loáisa's and Saavedra's expeditions. The only asset of value for Spain's men on Tidore was the *Florida*, which was in great disrepair after just five months at sea. Even though the vessel was constructed earlier that same year, the *Florida* required extensive repairs if a return voyage to Mexico was to be made. Over the course of ten weeks and with a great deal of aid from native Tidorans, the *Florida* was beached, all the rotting and worm-eaten wood was replaced, and the hull was sealed (much like Magellan's *Victoria*) with a local mixture of substances. The ship was eased back into the water and its cargo hold filled with seventy *quintales* of cloves, all of which was collected prior to the arrival of the *Florida* by Loáisa's men and the local Tidorans.³⁴³ And so, with 7,000 pounds of spices, Saavedra set out for Mexico on 11 June 1528, hoping to take the *Florida* directly east back to New Spain, as per Cortés' instructions. His crew consisted of a makeshift assortment of his own men and a mix of Loáisa's and even a few Portuguese defectors from Ternate, totaling thirty in all.³⁴⁴ Many of the available men had to remain behind to protect Spain's modest fortification on Tidore. The *Florida* made fair progress with favorable winds, putting 250 leagues behind her in two months' time. Off the

³⁴³ Spate, 93; Noone, 180.

³⁴⁴ Noone, 181. I have been unable to find any evidence of Southeast Asians being taken as crewmen for the *Florida*'s return journey, but it is a distinct possibility.

coast of New Guinea however the *Florida* was becalmed. Saavedra changed course to the Northeast in search of better winds and made it as far as 14°N and 800 leagues from the Spice Islands until he encountered unrelenting headwinds. With no way through the Pacific, Saavedra gave the order to turn back, putting into Tidore in mid-November, 1528.³⁴⁵ Unknown to Spanish mariners at that time—Saavedra included—sailing eastward at such latitudes was impossible due to year-round contrary winds and currents.

Already the ship's hull had become once again rotted through and an additional five months of repairs were made to the *Florida* before a second return attempt could be made. At the time of Saavedra's return to Tidore the *Florida* had been in service for just one year yet the vessel seemed to be on its last legs. Considering the vessel was built new (unlike Magellan's and Loaísa's vessels which were purchased used in Spain, and which endured much longer) it would seem that the craftsmanship and materials put into building the *Florida* could hardly have been worse.³⁴⁶

It was not until 3 May, 1529 that Saavedra was underway once again for New Spain aboard a completely overhauled flagship. His second attempt at returning eastward across the Pacific met the same contrary winds however. With his crew pushing doggedly ahead as far as 31°N Saavedra passed away in the middle of the Pacific. Now leaderless and unable to find winds favorable for an eastward crossing, the *Florida* limped back to the Spice Islands once again with only twenty-two survivors aboard. Upon their return they found that the Portuguese had captured the small Spanish outpost at Tidore. Saavedra's survivors met up with their

³⁴⁵ Navarrete, 5: 302.

³⁴⁶ Martin J. Noone puts it best, "the troublesome Florida was leaking badly...further evidence of faulty material and slovenly workmanship; a shortcoming that should cool the ardour of enthusiasts for the achievements of the earliest ship-builders in the primitive conditions of the west coast [of New Spain]." See, Noone, 184.

renegade compatriots at Zamafo on the neighboring island of Gilolo where they had retreated with just fifteen survivors during the *Florida's* second absence. Over the course of the next two years, the Portuguese captured these remaining Spaniards and eventually returned those few who survived back to Spain aboard Portuguese ships across the Indian Ocean.

One could easily make the case that the failure of Saavedra's expedition was primarily the result of hasty preparations and poor ship construction in New Spain, and not necessarily the distances and attrition suffered in Pacific seafaring. Departing from New Spain rather than far away Seville cut down the distance to the Spice Islands tremendously. But with just three small vessels of poor construction, the outcome of Saavedra's expedition was as disastrous as those of his predecessors. With or without native Tidoran aid, the Spanish outpost in the Spice Islands was doomed. After a string of disappointing expeditions where no ship except Magellan's *Victoria* managed to return to Spain, King Charles V signed the Treaty of Zaragoza in 1529. Spain relinquished its claim to the Moluccas to Portugal in exchange for 350,000 ducats. The decision would prove hugely influential as it forced Spain to seek out an alternate base of operations in the Far East. From this point forward the Philippines (or the *Islas del Poniente* as they were known at the time) became the new target of Spain's trans-Pacific endeavors. By redirecting their colonial efforts to the Philippines, Spain was unknowingly improving their standing in Southeast Asia. In Manila Bay the Spanish would discover a much more concentrated population of indigenous peoples, a wealth of food, vast forests of timber for shipbuilding, and most important of all, a thriving shipbuilding industry ready to be exploited. The Spice Islands, while offering hugely valuable spices, could not support a shipbuilding industry on the scale necessary to sustain trans-Pacific navigation. Manila Bay would prove to be the key asset that Spain needed to begin thriving in Southeast Asia and the larger Pacific. The

wealth of Manila Bay was not immediately discovered however. It was not until 1570 that Spaniards in the Philippines comprehended the strategic value of Manila's human and environmental resources.

Before the voyage of Villalobo's six ships, we must briefly consider the single vessel under the command of Hernando de Grijalva. After delivering badly needed supplies to Pizarro on behalf of Cortés in 1537, Grijalva set off across the *Mar del Sur* from South America, as per Cortés' instructions. Grijalva's voyage is almost not worth considering here as it was only a single vessel, the crewmen were ill prepared for the voyage, and there was little in terms of planning. In other words, there was no real chance of success. As O. H. K. Spate aptly summarizes, "the first crossing from Peru to the East Indies was unofficial in its origin, inconsequential and mutinous in its progress, and miserable in its ending."³⁴⁷ In actuality, Cortés was not sending Grijalva and his small ship to the Spice Islands, but rather to seek out rich islands rumored to be vaguely situated somewhere to the west of Peru. From the start this was a futile mission. After sailing a great distance to the southwest, (perhaps as far as 29° S) Grijalva was unable to locate winds for a return to New Spain.³⁴⁸ After he rebuffed his crew, who desired to sail on to the Spice Islands despite the limits set down by the Treaty of Zaragoza, Grijalva was killed by mutineers, who then took the ship even further into the Pacific. In the end the majority of the crew starved to death and the ship was wrecked somewhere on the shores of New Guinea. Only a small number were left to be rescued by the Portuguese in the nearby Spice Islands.³⁴⁹ In almost every way Grijalva's voyage across the *Mar del Sur* mimicked those that came before and immediately

³⁴⁷ Spate, 96.

³⁴⁸ Borah, 14.

³⁴⁹ Borah, 13 – 14.

after. Contrary winds, difficult crewmen, an unstable vessel, unknown geography, and a hostile Portuguese force once again came together to ensure another Spanish failure in the Pacific.

Ruy López de Villalobos set out from New Spain under entirely different circumstances than did Saavedra or Grijalva.³⁵⁰ Firstly, by the 1540s the Spice Islands were no longer part of Spain's imperial agenda in the Pacific. Having relinquished claims to the Moluccas in 1529, Villalobos was instructed to instead make for the *Islas del Poniente* (Western Islands) soon to be renamed the Philippines in honor of the heir to the Spanish throne, Philip II.³⁵¹ Once in the archipelago Villalobos was to establish a colonial base from which ships could be refit and return to New Spain. By making for the *Islas del Poniente*, Spain was seeking out the very same islands that Magellan had made landfall at in 1521, the same islands that Loáísa's surviving ships had stopped at shortly thereafter, and the same islands that Saavedra had resupplied at before making his final push south to Tidore. If Spain could not occupy the Spice Islands, it was hoped that Villalobos could create a foothold somewhere near the antipodal line of demarcation through which pressure could be put on the Portuguese and Spain could cultivate its own commercial and political ambitions in the region. Another key difference between Villalobos' and Saavedra's expedition was their size; Villalobos had at his disposal a fleet that was larger, much better prepared, and better supplied. Where Saavedra's small and hastily organized expedition suffered a great many complications early into their voyage, Villalobos navigated the outbound leg with no difficulties. Indeed, Villalobos' expedition marks the first time in Spain's history in the

³⁵⁰ There are two extant primary accounts of the Villalobos expedition, both of which are reproduced in *Colección general de documentos relativos a las islas Filipinas existentes en el archivo de Indias Sevilla*, 5 volumes (Barcelona, 1918 – 1923). There is account of Garcia Escalante de Alvarado, and the much shorter letter of Prior Sanesteban.

³⁵¹ Harry Kelsey, "Finding the Way Home: Spanish Exploration of the Round-Trip Route Across the Pacific Ocean," *The Western Historical Quarterly* 17 (1986), 158.

Pacific that an expedition reached Asia with all of its ships intact and the bulk of its crewmen alive and healthy.

Villalobos' successful crossing of the Pacific and the arrival of his fleet of six vessels at the island of Mindanao on 2 February 1543 marked a key turning point in Spain's Pacific endeavors. Villalobos, by navigating the Pacific in three short months with no ships lost, made a clear break from the experiences of Magellan, Loaísa, Grijalva, and Saavedra, which, after their Pacific crossings, found themselves with ships and crew on the brink of total ruin. Thus while Villalobos' vessels still had the disadvantage of costing a king's ransom, they were at least a significant improvement in durability over Saavedra's vessels. Villalobos' troubles began only *after* arriving in the newly named Philippines. His fleet had set out from New Spain with plenty of victuals to make the crossing, but not enough to support his crew once they arrived in the Far East. Food and fresh water would have to be secured from amongst the islands if a viable colony were to be established. Gaining access to such resources proved nearly impossible as the scattered native settlements of the southern Philippines largely practiced subsistence agriculture. Fray Gerónimo de Santisteban, a member of the expedition, reported to Viceroy Mendoza that

...we found a little rice and sago, a few hens and hogs, and three deer. This was eaten in a few days, together with what remained of the ship food...Finally we ate all the dogs, cats, and rats we could find, besides horrid grubs and unknown plants, which all together caused the deaths and much of the prevalent disease.³⁵²

Having made landfall on the eastern shore of Mindanao at roughly 7° N during late winter when winds blow to the south, Villalobos and his men were trapped along a desolate coast with little in the way of food or supplies. If the fleet had made landfall at 10° N or higher they could have followed the route of Magellan into the Visayas through the Surigao Strait, or through the San Bernardino Strait, or any number of other navigable channels. Such as things were however,

³⁵² Gerónimo de Santisteban, Blair and Robertson, 2: 63.

Villalobos' men and ships began to waste away on what was soon to be called "The Starvation Coast" with no way of sailing north into the Visayas.

The account of Santisteban contains the following vivid description of what was likely scurvy as well as a portrayal of the dire situation he and the crew of Villalobos' fleet had come to find themselves once in the Philippines:

The beginnings of hunger and a great deal of sickness; a sickness new to us, swellings of the gums and limbs, accompanied by livid blotches on the skin. There were no people in the neighborhood from whom we could buy food...In the end we were compelled to run south with the wind in search of some town along the coast...Instead of selling food, the natives shot arrows...Five or six men were wounded...³⁵³

The lack of food was not the only obstacle preventing Villalobos from creating a viable Spanish outpost in the Philippines; his efforts at returning a ship to New Spain were also complete failures, mirroring almost exactly the aborted attempts of Saavedra in 1528 and 1529. In early August of 1543, Villalobos selected the *San Juan de Letrán* to attempt a return voyage to New Spain, the *San Juan* being in the best condition of the six ships. After running with favorable winds as far as 30° N, the *San Juan* was forced back after suffering extensive damage in a heavy storm.³⁵⁴ A second attempt was made to reach New Spain in May of 1545, this time by sailing to the southwest, but was headed off by contrary winds just like Saavedra's *Florida*.³⁵⁵ At this point it would seem that while Spain had just narrowly managed to overcome the breadth of the Pacific there was a further challenge to be overcome in finding a viable return route eastbound. Indeed, the winds and currents of the Pacific were completely unknown to the Spanish, and would not be in the least bit understood until the first successful round trip across the Pacific was made in 1565, some twenty years later.

³⁵³ Noone, 224.

³⁵⁴ Kelsey, 158.

³⁵⁵ Kelsey, 158.

The Villalobos expedition ultimately suffered the same fate as those voyages that had come before. Starving, unable to find a return route, and without a developed port from which to draw aid, the surviving crew retreated to the Spice Islands in the hopes of being offered badly needed supplies from the Portuguese. An agreement was struck with the commander of the Portuguese forces in the East Indies allowing Villalobos' men—of which only 117 were left alive of an original complement of 400—to take passage back to Europe aboard Lusitanian vessels via the Cape of Good Hope. Villalobos died while in the Moluccas in April of 1546. Villalobos' failure stemmed directly from the fact that he was unable to establish a dependent relationship with the indigenous peoples of Mindanao or the Viasayas, which would have enabled his men to forge a more lasting presence in the region while they figured a way to get a vessel back to New Spain. Spain's men of the sea were able to hold on a good deal longer in the Moluccas because their numbers were much smaller. Where Villalobos had to feed roughly 300 Spaniards, there were usually never more than a few dozen Spaniards on Tidore. Additionally, the Spaniards on Tidore managed to establish a political alliance with the natives through which food, labor, and building supplies were provided in exchange for military service to the sultan. No such relationship was established during Villalobos' tenure in the Philippines, therefore his venture failed spectacularly.

Conclusion

Once Villalobos's fleet and Grijalva's lone ship had departed Mexico and disappeared over the horizon Pacific exploration entered another prolonged respite. Excessive costs as well as hostilities between officials in New Spain delayed the next trans-Pacific fleet until 1564. Viceroy

Mendoza wrote to the Council of the Indies in 1551-1552 urging for further efforts at crossing the Pacific but received the cold reply from Charles V that “it is not advisable to strain relations with the Portuguese right now.”³⁵⁶ It was not until 1559, after Philip II took to the throne for his aging father, that permission was given to once again make preparations for a trans-Pacific fleet. By this time New Spain was under the rule of a new viceroy, Luís de Velasco.

It was evident at this point that the size of the Pacific Ocean still posed significant challenges to the expansion of Spain’s maritime reach. After roughly half-a-century of striving to reach Asia, Sebastián del Cano’s *Victoria* remained the only vessel to have accomplished the feat of making it there and back again. During this very same period the Portuguese enjoyed tremendous success in South and Southeast Asia. This was the case quite possibly for no other reason than the fact that Spain’s Iberian rivals were able to avoid Pacific navigation altogether via their eastern route around the Cape of Good Hope. Geographic determinism seems difficult to ignore in this case, especially when one considers the nearly identical motives, available resources, level of technological development, and goals shared by Spain and Portugal.

The Pacific was the primary determining factor in limiting Spain’s success in Asia. This is a fact that is rarely given appropriate attention in historical scholarship, especially when one considers the long term geo-political and global commercial implications this had for the early modern world. Henry A. Morton is one of the few to acknowledge that,

Without the sailing ship, the “expansion of Europe” could not have taken place; the ship was the sword of policy or the tool of commerce, whichever the kings and councils decided. To be these things in the Pacific, however, required qualities other than mere mobility. The sword of policy becomes blunt and worn when it is so far from the facilities of its power base. The vehicle of commerce or of exploration faces requirements of sturdiness, capacity, and self-defense which the more confined waters of the Mediterranean and Atlantic already knew, but only mildly in comparison. For centuries,

³⁵⁶ Noone, 263.

when Pacific bound, European ships, whether Kings' ships carrying out national policies, or trading flutes carrying calico to clothe Eve, were sailing into vast leagues of the unknown.³⁵⁷

The task remains then to show how Spain's men of the sea overcame the challenges posed by the Pacific and to show how an annual trans-Pacific trade was introduced to this vast sea by 1571. How did the Spanish come to regularly utilize vessels of nearly a thousand tons capacity in the Asia-Pacific region before the end of the century? As we will now see, the foundations of the Manila-Acapulco galleon trade are to be found in Asia, not Europe or the Americas.

³⁵⁷ Morton, 93.

CHAPTER 4

Indio Labor and Philippine Timber: The Foundation of the Manila-Acapulco Galleon Trade

“There is in these islands an abundance of wood and men, so that a large fleet of boats and galleys may be built...To my way of thinking...the ship that would cost ten thousand ducats in Guatemala, and in Nueva España thirty [thousand], can be made here for two or three [thousand].”

Francisco de Sande, “Relation of the Filipinas Islands,” 7 June, 1576

Miguel López de Legazpi, who was the commander of the next trans-Pacific expedition in 1564 and who was to serve as the first governor general of the Philippines, oversaw the foundation of Spain’s first permanent colonial outpost in Southeast Asia in 1565 at Villa de Santísimo Nombre de Jesus on the island of Cebu. From Cebu, Legazpi and his small band of men orchestrated the first stages of Spain’s conquest of the archipelago. Like Saavedra and Villalobos before him, Legazpi’s fleet was assembled along the Pacific coast of the New World at extraordinary cost. Due to a continuing lack of materials and experienced shipyard manpower Legazpi’s fleet of two *naos* and two small *pataches* were completed at the expense of nearly 400,000 pesos.³⁵⁸ Legazpi and his men accomplished the outbound leg of the voyage with little mishap, but once amongst

³⁵⁸ One primary source account claims Legazpi’s fleet cost “382,468 pesos, 7 tomines, and 5 grains of common gold, and 27,400 pesos, 3 tomines, and 1 gram of gold dust,” while another account claims the total was closer to 600,000 pesos. See Blair and Robertson, 2: 220.

the Philippine islands success was slow in coming. For the first five years Legazpi's men languished in the sparsely populated Visayas as they struggled to secure access to food and drinking water while at the same time fending off attacks from *Moro* raiders and other hostile *datus*. Relations with the indigenous population became especially strained when Legazpi's starving men resorted to launching armed *entradas* to secure food from local communities when it could not be traded for or otherwise peacefully obtained.³⁵⁹ Thus, while Spain's men of the sea were beginning to find success in getting vessels and crewmen to Asia, they still had no means to sustain their presence.

Even after the first successful completion of a return voyage across the Pacific from Asia back to New Spain in 1566—a feat which was accomplished by the experienced Pacific mariner Andrés de Urdaneta using one of Legazpi's ships at Cebu—the status of Legazpi's men was in no way improved.³⁶⁰ While Urdaneta's return voyage did open up round trip navigation across the Pacific, this had little impact on the welfare of the Spanish *conquistadores* in the Philippines. When the first resupply ship to rendezvous with Legazpi arrived later in 1566—this was the *San Jeronimo*—it proved to have next to nothing in the way of new supplies to unload. The arrival of the *San Jeronimo* was an example that the immense distance of the Pacific did not enable vessels to spare much space for supplies other than food for the crossing. Making matters worse, not only did the *San Jeronimo* offer little in terms of food, but the vessel brought many more mouths to feed in the already starved outpost. On top of these hardships, the vessel itself had been almost

³⁵⁹ The subsistence farming economy throughout the Visayas could not support the hundreds of newly arriving Spanish, who refused to become agriculturally productive for themselves. Cushner, *Spain in the Philippines*, 59.

³⁶⁰ See chapter 5 for more on Urdaneta's 1565 return voyage to New Spain. Felipe Fernández-Armesto provides a good summary of Urdaneta's accomplishments in the grand history of global exploration. See Felipe Fernández-Armesto, *Pathfinders: A Global History of Exploration* (New York: Oxford University Press, 2006), 193 – 244.

completely destroyed during the Pacific crossing and was soon dismantled for scrap. Legazpi reported that the ship had arrived “very worm eaten” and “leaking very badly.”³⁶¹

Much like Villalobos’ men who slowly starved to death on the shores of eastern Mindanao in the 1540s, Legazpi’s men resisted tilling the soil for their own betterment. Spain’s trans-Pacific voyagers in the sixteenth century risked their lives on such a long voyage not to become agricultural laborers, but rather to enjoy the wealth and status of becoming estate owners, conquerors, *encomenderos*, and title holders in Asia. As such, Legazpi’s men found good cause to become frustrated when they found no evidence of gold, which Pigafetta had claimed lay about the rivers of the Philippines in pieces “the size of walnuts and eggs.”³⁶² Nor did they find any exotic spices to exploit as their Portuguese rivals did in the Moluccas.³⁶³ Indeed, there appeared to be nothing whatsoever worth plundering in the Philippines save the occasional gold trinket exhumed from the grave of a native.³⁶⁴ As a result of these frustrations, attempted mutinies were a yearly occurrence during Legazpi’s time in the Visayas. In November of 1565 three ringleaders of a mutiny were executed after it was found out they intended to steal the *San Juan* and set off for more lucrative prospects in the Portuguese Spice Islands. Empty stomachs were the likely inspiration of another plot in 1566 which saw a second group put to death after they made plans to defect to the Portuguese. It is little wonder that Legazpi confessed

³⁶¹ “Testimony given by the officials of His Majesty,” Licuanan and Llavadro, vol. 2, 223-224.

³⁶² Pigafetta, *Magellan’s Voyage*, 69; Schurz, *The Manila Galleon*, 46.

³⁶³ Following the signing of the Treaty of Zaragoza in 1529, the Spice Islands become the exclusive possession of Portugal. Spain was left to seek valuable spices elsewhere in the region. For Spain’s desperate efforts at spice production in the Philippines, see Paula De Vos, “A Taste for Spices: Spanish Efforts at Spice Production in the Philippines,” *Mains’l Haul: A Journal of Pacific Maritime History*, 41: 4 & 42: 1 (2005/2006): 33 – 42; De Vos, “The Science of Spices.”

³⁶⁴ As early as May of 1565, just one month after the founding of the Spanish settlement on Cebu, Legazpi wrote complaining that his men opened “many graves and burial places of the native Indians...whence they have abstracted gold, jewels, and other valuables...” Quoted from Blair and Robertson, 2: 172.

to King Philip II in his report of 1569 that, “the Philippines ought to be considered of little importance.”³⁶⁵

How then did the Philippines grow into a major hub of global commerce just a few short years following Legazpi’s apparent admission of defeat? How can we account for the rapid development of a thriving trans-Pacific galleon trade and the establishment of a bustling global commercial center in the midst of such scarcity and despair? Why was Francisco de Sande speaking so highly of the Philippines in 1576 when Legazpi had lamented their uselessness to the crown just ten years prior? This chapter argues that the galleon trade was predicated upon the exploitation of the indigenous population and environmental resources of the Manila Bay region, and that the colonial labor systems established by Legazpi’s men immediately following the founding of Spanish Manila in 1571 made possible the construction, maintenance, and operation of both trans-Pacific vessels and smaller vessels for coastal defense and local interisland commerce. The populated Manila Bay region offered Spaniards, at long last, the opportunity to systematically exploit indigenous labor, secure shipbuilding materials, and collect surplus agricultural products on a scale large enough to create a viable colonial infrastructure and to sustain a regular trans-Pacific connection with New Spain. The leader of the first expedition to Manila Bay, Martín de Goiti, excitedly reported back to Legazpi that the entire region of what was to become Spanish Manila was populated with numerous villages and that there was food in abundance. Manila Bay was situated amongst the most productive rice-growing provinces in the entire archipelago and was adjacent to a number easily navigable rivers, which facilitated the circulation of bulk rice shipments into the main population center.³⁶⁶

³⁶⁵ Quoted from Schurz, *The Manila Galleon*, 23.

³⁶⁶ Cushner, *Landed Estates in the Colonial Philippines*, 12.

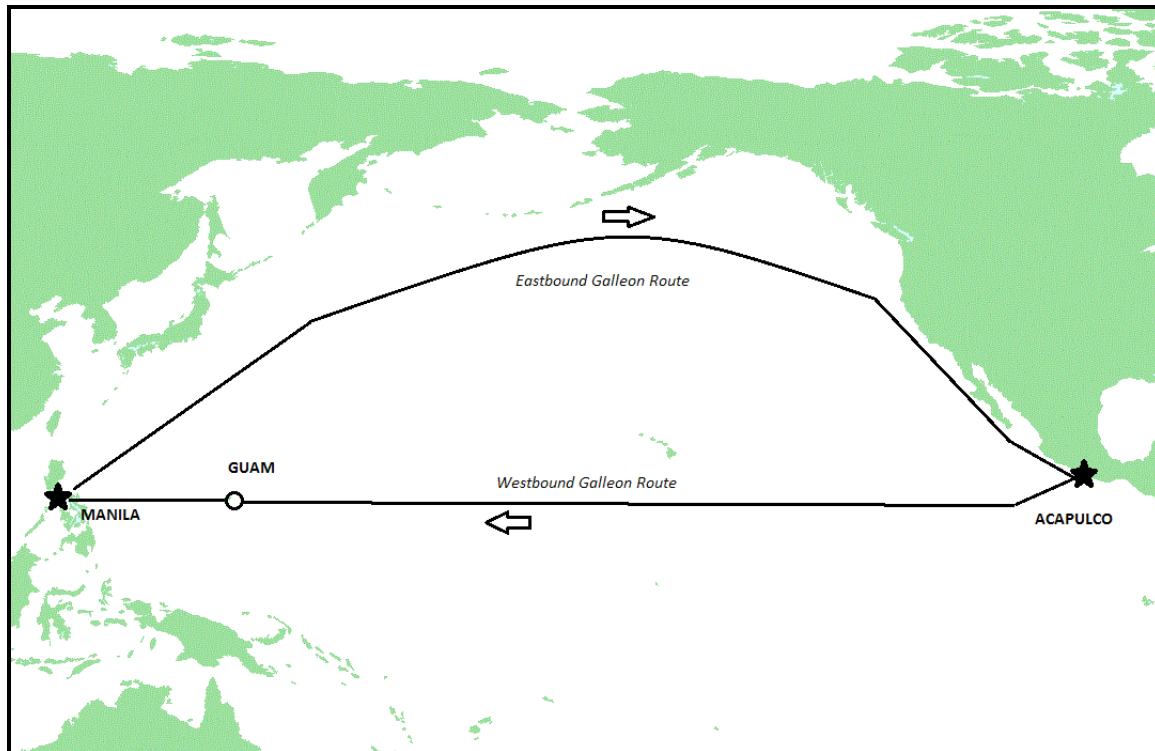


Figure 5. The Galleon Trade Route

Once in Manila, Spaniards were able to extract local knowledge from the population as to which building materials and species of timber were best suited to ship construction. This study will argue that alongside a productive agricultural base, timber was by far the most valuable natural resource to Spain's imperial ambitions in the Philippines. Not only did it facilitate the construction and repair of countless local vessels for defense and commerce, but the timber of the Philippines went into the construction of the Acapulco-Manila Galleons as well. We must also consider the important function of the tax and tribute systems introduced by the Spaniards, which, again, were predominantly for the purposes of sustaining the galleon trade. To date, social histories of the Philippines have concentrated upon indigenous colonial labor as being largely tied to building projects, the operation of landed estates, and church property. Here it will be made apparent that a large portion of the labor demands exacted upon the native *Indios* of the

Philippines in the late sixteenth and early seventeenth century were oriented towards galleon construction, be it through wood cutting, carpentry, repairing hulls with pitch and tar, rope-making, or sailcloth weaving. We must also consider that labor affiliated with the shipyards was amongst the most demanding tasks assigned to Spain's *Indio* subjects in the Philippines and therefore was the primary inspiration for numerous indigenous rebellions throughout the early colonial period. An examination of *Indio* shipyard labor and its impact on Philippine society will serve to supplement the standard historical narrative regarding the social transformation of the colonial Philippines in which the creation of landed estates and the efforts of missionaries have taken center stage.

The introduced systems of the *polo y servicios*, *casas de reservas*, and the *vandala*, specifically their operation and organization, have all been thoroughly examined by historians over the past half century. This dissertation will avoid the needless task of recounting the specifics of how such labor and tax systems operated. Here the aim will be to show that institutions like the *polo* and *vandala* did far more to support the creation and maintenance of the Manila-Acapulco galleon trade than has previously been recognized by historians. The centrality of the Manila galleon trade to the labor and tax systems of the colonial Philippines is made apparent when one considers the general lack of conquest and economic development that took place outside the Manila Bay region, especially when compared to developments in New Spain. The mountainous and forested landscapes of Luzon and the Visayas prohibited the formation of large *haciendas* and *rancheros* like those in New Spain, as such there was relatively little demand for estate labor as compared with Spanish America.³⁶⁷ Additionally, the absence of large

³⁶⁷ Cushner's study on early colonial landed estates in the Philippines found that "only in the southern extension of the [central Luzon] plain—in Tondo, Laguna, and Cavite—did the Spaniards establish large landed estates." Cushner, *Landed Estates in the Colonial Philippines*,

mines like those of Potosí or Zacatecas further reduced the need for mass labor systems outside of Manila and Central Luzon. The sugar plantation economy that would come to dominate the Philippine economy and landscape did not develop until much later in the colonial period. Indeed, the only sector of Spain's developing colonial economy that required vast inputs of indigenous labor on a continual basis was in the Manila Galleon trade. The single-minded focus with which Spaniards in the Philippines worked towards developing the trans-oceanic trade with China and New Spain ensured that galleon labor would constitute one of the most frequent and demanding obligations of *Indios* in the Philippines while estate and missionary labor would occupy a comparatively limited and static function within colonial society.

The early colonial labor and tax systems did not exist in a vacuum, however—they combined with locally available timber, agricultural products, and a wealth of indigenous knowledge in seafaring in shipbuilding to make Spanish Manila one of the most productive shipyards and trade entrepôts in all of Spain's empire. Evidence of this can be found in Spanish records and in the ships themselves. In 1649 Spaniards in Manila proclaimed that the Philippine-built *San Jose* was the largest ship in the world.³⁶⁸ And as early as 1616 the governor of the Philippines reported that all but one of the seven galleons currently anchored at Manila had been built in the Philippines.³⁶⁹ This observation may attest not only to the productivity of Philippine shipyards but perhaps also to the continued inability of New Spain's Pacific shipyards to support trans-Pacific voyaging. In either case, by the close of the sixteenth century Spain had found

13. This view of "limited" estate development is mirrored in the works of Phelan, Pearson, and Cummins.

³⁶⁸ Corpuz, *Roots of the Philippine Nation*, 1: 92 – 93.

³⁶⁹ de Pineda, "Philippine Ships and Shipbuilding," 26 May, 1619, Blair and Robertson, 18: 180.

success in creating the most vital asset for trans-Pacific navigation: a productive shipbuilding base in Asia.

One of the aims of this chapter is to stress the galleon trade's prominent place in the social history of the Philippines, and in Southeast Asia more generally. The galleon trade was built upon the colonial labor and tax institutions that Spanish conquerors introduced to the archipelago. Furthermore, the demands of operating and maintaining the Manila galleons were a tremendous consumer of labor and materials and therefore constituted a significant driver of social transformation in the Philippines. Integrated into this study of early colonial Philippine history and the galleon trade will be a historiographical (re)assessment of works on colonial labor and tribute collection in the sixteenth century Spanish Philippines. So much of the scholarship on the galleon trade focuses upon China, not the Philippines. Worse still, so much of the scholarship on the early colonial Philippines ignores the impact of galleon trade. For this study we must first recognize that while missionary activity and the formation and operation of landed estates were genuine sources of social restructuring under the Spanish regime, so too were the onerous and frequent demands associated with constructing and maintaining Spain's Pacific fleet. One of the dominant driving forces behind the "Hispanization" of the Philippines was in fact the labor and tax obligations forced upon the *Indios*, which were imposed largely for the benefit of maintaining the Manila galleon trade. It will further be shown that Spain's mustering of local labor and natural resources constituted a tremendously effective cost-saving system when it came to ship construction and the day-to-day operation of the colony, so much so that much of the overhead expense of running the colony was absorbed by the indigenous subjects through unpaid labor. This then begs a reassessment not just of Philippine social history, but more specifically of the commonly accepted logic that the Philippines were a considerable

expense for the Spanish crown. Historians often point to the annual subsidy sent from New Spain to the Philippines, but historians have not considered the savings that accumulated by moving shipbuilding from New Spain to the Philippines.³⁷⁰

This chapter will not examine labor alone, but will also take into consideration the environment and natural resources of the Philippines, which were exploited hand-in-hand with *Indio* shipbuilders. The exploitation of *Indios* through forced labor and taxation was accompanied by the exploitation of the agricultural and forest products of the archipelago, namely rice, timber, and hemp fibers. That the Philippines offered Spaniards a range of hardwoods ideal for ship construction was a critical factor in making the Philippines a viable colonial outpost for Spaniards in Southeast Asia. Securing timber for the construction of ocean-going vessels was amongst the most costly requirements for any European state wishing to maintain an overseas empire. The failure of shipbuilding efforts along the Pacific coast of New Spain largely stalled on account of a lack of labor and materials. The Philippines offered some of the highest quality timber and plant fibers on the planet, and when combined with indigenous labor, these valuable products were gathered at virtually no cost and fashioned into some of the world's largest and sturdiest vessels. By the close of the sixteenth century Spanish Manila had become the cheapest harbor in which to build ships and thus negated so much of the cost involved in traversing the vast Pacific Ocean. Securing timber and regulating forest resources was a time consuming and

³⁷⁰ It has been a general assumption amongst historians that the Philippines were a significant financial drain for the larger Spanish Empire. This view has only begun to be challenged in the last few years. See Leslie E. Bauzon, *Deficit Government: Mexico and the Philippine Situado, 1606 – 1804* (Tokyo: The Center for East Asian Cultural Studies, 1981); Luis Alonso, “Financing the Empire: The Nature of the Tax System in the Philippines, 1565 – 1804,” *Philippine Studies* 51 (2003): 63 – 95.

costly endeavor for states in the early modern era but was a fundamental necessity for establishing a strong naval presence and maintaining maritime trade routes.³⁷¹

Firstly, this chapter will examine the human (labor) demands of constructing galleons in the Philippines. *Indios* proved to be skilled carpenters and boat builders capable of overseeing the construction of galleons of over 1,000 tons capacity. Secondly, this chapter will consider the material (environmental) demands of building the Manila galleons, the most important resource being timber. The Philippines were home to a number of tree species ideally suited to galleon construction. Spaniards were able to utilize local labor and materials in concert to create numerous and productive European-style shipyards in very short order following the conquest of Manila.

Labor, Shipbuilding, and the Colonial Order in the Philippines

Social histories of the early colonial Philippines have all more or less argued for a “limited” Spanish impact on indigenous society, particularly when it came to the effects of economic development and colonial labor institutions versus what was occurring in New Spain.³⁷² It is a widely accepted fact that the booming trade that took place in Manila—which saw Chinese silks exchanged for many tons of New World silver each year—was more or less confined within the walls of Manila and inspired little change or development in the Philippine countryside. Prior to the eighteenth century, Spaniards did little to invest in infrastructure or agricultural development

³⁷¹ There are many works on early modern shipbuilding and forestry. For a global environmental perspective on Europe’s shipbuilding, see Joachim Radkau, *Nature and Power: A Global History of the Environment*, translated by Thomas Dunlap (New York: Cambridge University Press, 2008), 122, 173, 190.

³⁷² Pearson, “The Spanish ‘Impact’ on the Philippines,” 165 – 186.

outside of the Manila Bay region as most all colonial activity was focused on the galleon trade at Manila. The goods and specie that were exchanged at Manila with the ever-growing resident Chinese merchant community were quickly shipped back out again, the silver to China and the silks, porcelains, and other luxury goods to Acapulco.³⁷³ Thus Manila's commercial function as an entrepôt did almost nothing whatsoever to develop the larger colony. In addition to the lure of easy profits in the galleon trade, the mountainous and jungle landscape of the Philippines was not conducive to the formation of *haciendas*, *rancheros*, or other large landed enterprises that would have drawn Spaniards to invest outside of Manila.³⁷⁴ While many landed estates did develop, their extent and their role in the colonial economy were limited when compared to colonial Mexico. The Philippines also failed to provide the opportunity for large-scale mining operations in the early colonial period. Also lacking were significant stocks of spices to exploit as in Ternate or Tidore.³⁷⁵ It can therefore be argued that although the commercial success of Manila was significant, both within the context of the Spanish empire and the larger emerging global economy, the sum total of Spanish commercial activity in the Philippines did little to transform the fundamentals of indigenous society before the eighteenth century and did not extend all that far beyond Manila.³⁷⁶ Simply put, the range of Spanish control in the Philippines was limited on

³⁷³ The presence of a sizable Chinese merchant community was yet another valuable asset Manila Bay had to offer. For more on the commercial function of Chinese diaspora communities throughout Southeast Asia, see Anthony Reid, *Sojourners and Settlers: Histories of Southeast Asia and the Chinese*. 2nd edition. Honolulu: University of Hawaii Press, 2001.

³⁷⁴ Cushner, *Landed Estates in the Colonial Philippines*, 12 – 13.

³⁷⁵ De Vos, "A Taste for Spices."

³⁷⁶ For the leading works on the social history of the early colonial Philippines, I am counting Nicholas P. Cushner, *Spain in the Philippines*; Cushner, *Landed Estates in the Colonial Philippines*; Phelan, *The Hispanization of the Philippines*; Phelan, "Free Versus Compulsory Labor"; Larkin, *The Pampangans*; Larkin, "Philippine History Reconsidered: A Socioeconomic Perspective," *American Historical Review* 87 (1982): 595 – 628; Cummins Cushner, "Labor in the Colonial Philippines"; Roth; Pearson, "The Spanish 'Impact' on the Philippines"; McCoy

account of the colony's Manila-centric structure while at the same time there was a minimal need for estate laborers, miners, and the like. It is little wonder then that so much of the social as well as cultural transformation that *did* occur in the early colonial Philippines is credited to the efforts of Franciscan, Dominican, Augustinian, and Jesuit missionaries who were often the only Spanish representatives to venture beyond the walls of Manila.³⁷⁷

While Spain's impact on the Philippines was in many ways truly limited—particularly when compared to the environmental and social transformations brought about in the Americas in the sixteenth and seventeenth century—I argue that the labor demands of Manila-Acapulco galleon trade constituted a significant burden for indigenous society in the Philippines. *Indios* were called upon to serve in numerous capacities for the construction, maintenance, and operation of the Manila galleons, an industry which required a far more concentrated pool of laborers than any other sector of the colonial economy of the Philippines. Furthermore, laboring for the Manila galleons was often the most onerous of duties and was rife with abuses—it was a regular occurrence that *Indio* subjects were overworked and underpaid, laborers often spent months away from their homes when felling timber, and those conscripted into service at sea aboard the galleons themselves often never returned home. So great was the fear of being called to labor for the galleons—either at sea or on land—that numerous rebellions erupted in protest, thousands fled their homes, and many more sought reassignment or asylum in missionary estates. When these labor abuses were at their peak during the shipbuilding frenzy of the Hispano-Dutch

and de Jesus, *Philippine Social History*; William Henry Scott, *Cracks in the Parchment Curtain*; Scott, *Barangay*.

³⁷⁷ The classic study on Jesuit activities in the early Spanish Philippines is Horacio de la Costa, *The Jesuits in the Philippines, 1581 – 1768* (Cambridge, MA: Harvard University Press, 1967). See also, Gschaedler, “Religious Aspects of the Spanish Voyages in the Pacific during the Sixteenth Century and the Early Part of the Seventeenth,” *The Americas* 4 (1948): 302 – 315. For a post-colonial analysis of missionary activity in the early Spanish Philippines refer to Rafael.

War in the early seventeenth century, the population of Spain's subject *Indio* population actually suffered a noticeable and long-term decline.

As we will see, a handful of Spanish writers took up their pens in protest and cataloged the abuses they witnessed. Writers like Fray Domingo de Salazar, bishop of the Philippines in the 1580s, Gomez de Espinosa y Estrada, *oidor* of the Manila *audiencia* in the 1650s, as well as Antonio de Morga, another member of the *audiencia* in the last years of the sixteenth century, all recounted innumerable instances of abuse of native subjects as they related to shipyard labor, namely the overland transport of materials.³⁷⁸ Such writers were in agreement that abuse was far and away the most frequent and intense in those services affiliated with maintaining the Manila Galleon trade. The hardships endured by *Indios* in service of the Manila Galleons was similarly confirmed in writing by numerous and repeated royal edicts issued by Philip II, Philip III, and Philip IV, all of whom called for the mitigation of overwork and the implementation of humane policies towards Spain's indigenous subjects in the Philippines. Although the indigenous of the Philippines are often without a voice in history, having left no written records of their own, their reactions to such labor abuses in the service of the Manila galleons are made clear in a number of open revolts as well as their willingness to abandon their homes altogether, thereby disappearing from Spanish tribute registers.

The first chapters of this study have revealed the demands of shipbuilding in the early modern period in Europe and the early colonial Americas, particularly in terms of labor, financial costs, the need of skilled craftsmen, and building materials. All of these elements became

³⁷⁸ Fray Domingo de Salazar, "Affairs in the Philippines Islands," 1583, Blair and Robertson, 5: 210 - 255. For an analysis of Gomez de Espinosa's *Discurso Parénetico*, see Cummins and Cushner, "Labor in the Colonial Philippines," 117 - 148. The classic work by Antonio de Morga is *Sucesos de las Islas Filipinas*.

increasingly difficult and costly to procure as Spaniards moved ever further from the established shipyards of Europe. Fortunately for Spain's prospects in the Asia-Pacific region, Legazpi's decision to move his colonial headquarters to Manila Bay in 1570-71 led to the discovery of large numbers of skilled and unskilled laborers as well as all the necessary raw materials for shipbuilding, namely timber and hemp for making cordage.

All colonial labor in the Spanish Philippines was predicated upon the preservation of the dominant pre-Hispanic social unit of the archipelago, the *barangay*.³⁷⁹ The community of the *barangay* was headed by a *datu* who attained his power through lineage and wielded it through his control over laborers and the collection of tribute.³⁸⁰ Something akin to debt slavery existed within this structure, but so too did a class of free subjects (*timawa*). Spaniards, as they did in New Spain, sought to preserve native social structures in order to establish some measure of population control at minimal effort. Thus *datu*s became *cabezas de barangay* and took on the role of an intermediary or *principalia* class between the colonial state and the larger subject population. For the most part, *datu*s retained their pre-colonial station amongst their local communities.³⁸¹ Not all was unchanged at the local level however. The position of the *datu* within his community was now reinforced with greater authority. The *datu* not only had the backing of a foreign colonial power but now had the added duties of collecting tribute for the central government, distributing wages to laborers, and directing the conscription of labor and forced purchases. As we will see, not only were these labor and tax systems exploitative on their own, but Spain's *Indio* subjects were further subjected to hardship through the many abuses carried out by *datu*s who utilized their function as colonial paymasters to benefit themselves. It

³⁷⁹ Scott, *Barangay*.

³⁸⁰ Scott, *Barangay*, 127 – 142.

³⁸¹ Cushner, *Spain in the Philippines*, 107.

was often the case that *datus* pocketed laborer's wages rather than distribute them. In some cases *datus* auctioned off *casas de reservas* at hugely inflated prices.³⁸²

The primary function of the *cabezas* within the colonial state was to oversee the collection of tribute and to ensure the smooth functioning of the *vandala* and *polo y servicios*.³⁸³ The *vandala* was a system of force purchases, whereby Spaniards were able to appropriate vital goods such as rice and chickens from their tributes in exchange for a small payment. Seeing as the amount paid to the *Indios* was always far below the fair market price for their goods, the *vandala* can be considered as an overt system of exploitation, a fact which did not go unnoticed by many missionaries sympathetic to the plight of their native followers. The *vandala*, it should be noted, was an obligation on top of the regular payments of tribute, which was essentially a head tax that fluctuated a good deal over the early colonial period and at various times was demanded in specie or in agricultural goods.³⁸⁴ The *polo* was the general labor obligation Spaniards required of every one of their *Indio* subjects, minus the *datus* who were exempt from labor. Under the *polo* an *Indio* was required to attend to labor duties assigned by the colonial government for a certain number of days each year.³⁸⁵ While such labor duties came in many varieties, the most demanding and most often requested service was laboring for the shipyards. Shipbuilding and the felling of timber often required that *Indios* labor far longer than the agreed

³⁸² *Reservas* were the much coveted exemption from the *polo y servicios*. "Sometimes [*datus*] would impose unauthorized taxes on their people, and keep the proceeds for themselves," writes Pearson. "Other abuses of their official positions included keeping for themselves the wages of rowers or porters hired by the Spanish, and allowing people to bribe them to secure exemption from the *polo* and other Spanish impositions." Pearson, "Spanish 'Impact' on the Philippines," 169. See also, Blair and Robertson, 28: 248 – 252.

³⁸³ Pearson, "Spanish 'Impact' on the Philippines," 167 – 168.

³⁸⁴ Cushner, *Spain in the Philippines*, 101 – 108.

³⁸⁵ Cushner, *Spain in the Philippines*, 112 – 117. While the number of days often changed, it would seem that forty days of labor per year was the norm in the sixteenth and seventeenth century. Many times these labor limits were exceeded by colonial officials under pressure to complete various projects.

number of days. Similarly, the felling of timber required *Indios* to travel far from their homes with little or no food to support them. In this regard shipbuilding was far more onerous than other duties demanded under the *polo y servicios*.

The colonial labor and tax structure as imposed by the Spanish did not inherently lead to upheaval or wholesale changes within indigenous society. Admittedly, a good portion the pre-Hispanic social order was preserved through the conquest. Many historians of the early colonial Philippines have observed as much but perhaps go too far in arguing that the Spanish impact was for the most part “limited.” M. N. Pearson elaborates that,

...during the first two centuries of their rule the Spanish caused no important structural changes in the economic or political aspects of Filipino life. Society and economy remained essentially what they had been before, with the different elements more or less in the same equilibrium...indeed, the *principales* had no reason to desire change. These same people remained politically dominant over areas of about the same size as the pre-Spanish *cabeza*. They also continued to exercise their traditional control over most of the dependent labour.³⁸⁶

Pearson is an informed historian of Philippine social history. Nevertheless his overemphasis on the preservation of social structures obscures the social changes that were brought about through the introduction of the *polo y servicios*, *vandala*, and the *casas de reservas* systems. While implemented by *datus* through the traditional power structures of Philippine society, the demands of the Manila galleons manifest in these colonial labor and tax systems wrought profound change and turmoil. This theory of “limited” Spanish impact dates back to at least the 1960s and is present throughout most works of Philippine social historians, and, in most cases, leads to an underestimation of the Galleon trade’s impact. John Leddy Phelan, another leading historian in the field, takes this argument to such an extreme that he is able to claim that, “By

³⁸⁶ Pearson, “Spanish ‘Impact’ on the Philippines,” 183 – 184.

1585 the stabilization of the galleon trade between Manila and Acapulco in which Mexican silver was exchanged for Chinese silks had done much to relieve pressure on the Filipinos.”³⁸⁷ As we will now see, such an argument is insupportable when one considers the continual pressure put upon *Indios* through the demands of galleon construction. To see the real changes and pressures brought about by laboring for the Manila Galleons we must look within and between these seemingly stable labor and tax institutions, which historians such as Cushner, Phelan, and Pearson have overemphasized as being simultaneously stable and limited in scope for much of the sixteenth and seventeenth century.

The labor systems introduced by the Spanish were intended to systematically levee laborers from the subject *Indio* population for the completion of a wide range of projects, including the construction and repair of fortifications, church property, and the repair of ships. Such a system was unworkable in the sparsely populated and underdeveloped Visayas, a region in which Spaniards had struggled to even secure enough food to meet their most basic needs let alone establish a thriving colonial base. Legazpi’s expedition languished in the Visayas from 1565 to 1571 on the edge of starvation. In the Manila Bay region however, while Spaniards did not find a population as large as the rumored “eighty thousand Moros” they were expecting, Legazpi’s men did find a thriving population center of several thousand with clearly defined social structures, a productive agricultural base situated in the surrounding provinces, and evidence of active commercial ties to China and greater Southeast Asia.³⁸⁸ With Manila subjugated Spaniards (and their *datu* allies) in the Philippines were at long last able to impose an

³⁸⁷ Phelan, “Free versus Compulsory Labor,” 190.

³⁸⁸ “Relation of the Conquest of the Island of Luzon,” 20 April, 1572, Blair and Robertson 3: 141 – 172. This detailed and revealing document of 1572 describes the first two years of Legazpi’s conquest of Luzon and the pacification of the natives of Manila Bay. Though the report was completed by an unknown author, it was dispatched from the Philippines just a year after the founding of Manila and has since found its way into the Archive of the Indies at Seville.

exploitative regime and to develop a workable colonial base. One of Miguel López de Legazpi's first orders given to his newly converted *datu* allies at Manila was to conscript laborers for the construction of the governor's house and thatched housing units for his men. At the same time local native leaders were set the task of feeding Legazpi's men.³⁸⁹ The offering of food and laboring for the construction of colonial edifices were ongoing obligations of the *Indios* throughout the Spanish colonial period. However, soon after the establishment of Manila and the growth of trans-Pacific trade, priorities shifted and shipbuilding became an ever greater consumer of *Indio* labor in the Philippines.

As early as 1570, it was apparent to Legazpi and his men that their survival and the development of the colony depended foremost upon securing new ships and materials for their construction and repair. If the sad state of the *San Jeronimo* was any indication, ships would need to be built anew in the Philippines rather than dispatched from the shipyards of New Spain. In a requisition for new supplies sent to New Spain and forwarded on to Spain in 1570 – 1571, the very first items Legazpi requested to be delivered to the Philippines were rigging, pitch, tow, two shipmasters, twelve carpenters, twelve caulkers, and a number of galley captains.³⁹⁰ Nearly identical requests had been made earlier, as in 1568 when Legazpi requested that above food and craftsmen he be sent “30 *quintales* of cordage,” presumably to refit his aging vessels.³⁹¹ We will see in the following section how the excessive costs of shipping such supplies from New Spain forced Spaniards to turn to local supplies of timber and cordage. For now, it is enough to recognize that by the time Legazpi had moved to Manila, it was recognized that developing a

³⁸⁹ Cushner, *Spain in the Philippines*, 113.

³⁹⁰ Blair and Robertson, 3: 132 – 134.

³⁹¹ “A list of what should be sent from Nueva España to Las Islas Filipinas thru Juan de las Ysla,” in Licuanan and Llavadro, vol. 2, 295.

shipbuilding industry in the Philippines had become imperative. To achieve this they would ultimately turn to local building materials as well as local sources of labor.

Given the maritime environment Spaniards found themselves in, and the vastness of the Pacific that separated them from other Spanish ports, nothing was more vital to the continued commercial success of the colony and its protection from foreign attack than a healthy naval force that was locally based and locally supplied. As such, shipbuilding became a major preoccupation amongst government officials. A report on the annual expenses made by the exchequer in the Philippines in 1584 indicates that shipbuilding constituted the second largest expense incurred by the colonial government, second only to the payment of government salaries.³⁹²

It was through the *polo y servicios* that thousands of *Indios* were conscripted each month for the felling of timber—the first stage in the construction of a new galleon and the most physically and mentally demanding. *Indios*, mainly from central Luzon, were sent throughout the interior of the island, often far from their homes for a month or more, to seek out and cut specific species of trees. The most prized specimens were those trees large enough to form mainmasts and keel beams of galleons. Some of these specimens were so large that in one instance a tree for a galleon mast required the labor of six thousand *Indio* laborers.³⁹³ Writing in a Memorial of 1621, Hernando de los Rios Coronel reported at length on the hardships endured by *Indios* during the construction of what were at the time rather large galleons in the Philippines.

³⁹² “Annual Income of the Royal Exchequer in the Philippines,” Blair and Robertson, 6: 47 – 53. Beneath the heading “Salaries and ordinary expenses,” the Royal Exchequer records a total yearly payment of 25,231 pesos for the salaries of government officials and the day to day operation of the government. The next highest combined expense came in supplying the shipyards with labor and materials, which comes to a total of 12,000 pesos. The excessive burden of paying government salaries was somewhat ameliorated when the Audencia of Manila was disbanded in 1590 on account of its burdensome cost to the colony’s finances.

³⁹³ Schurz, *The Manila Galleon*.

He [Governor Don Juan de Silva] began to place the said galleons on the stocks, and, as they were so large, scarcely could he find the necessary timbers in the forest. Consequently, he had to have them sought under great difficulties, and by penetrating the thicker recesses of the woods. There having found them, it was necessary, in order to drag and carry them to the shipyard, to depopulate the surrounding villages of the Indians, and to drag the timbers with immense labor, hardship, and cost to the Indians. The masts of one galleon cost the Indians, as is affirmed by the religious of St. Francis, and as I heard declared by the alcalde mayor of the province where they were cut—namely La Laguna de Bay—the labor of six thousand Indians for three months to drag them over very rough mountains. They were paid by the villages at the rate of forty reals per month apiece, but were given nothing to eat, and therefore, the wretched Indian had to look for food. I shall not relate the cruel and inhumane treatment of the agents, and the many Indians who died in the forest...Neither shall I tell your Majesty of the Indians who were hanged, those who deserted their wives and children and fled exhausted into the mountains, and those sold as slaves to pay the taxes imposed on them; the scandal to the gospel, and the so irreparable wrongs caused by that shipbuilding...³⁹⁴

This report made by Hernando de los Rio Coronel to the newly crowned Philip IV was, like many similar reports of the era, highly critical of governor de Silva. As we will see in Chapter 5, the first half of the seventeenth century was a period of accelerated shipbuilding due to a constant Dutch and *Moro* threat, which reached a crescendo during the tenure of de Silva. This necessarily put tremendous strain on *Indio* laborers thus inspiring many complaints regarding government shipbuilding policies.

Even during times of relative peace the gangs of woodcutters numbered well into the thousands, sometimes reaching as many as 8,000.³⁹⁵ Often conscripted from the lowlands, *Indio* woodcutters were forced to march far into the interior where the timber was located, meaning workers spent many months away from home, laboring in an unfamiliar climate. The poor working conditions were aggravated by the meager ration of four pesos worth of rice each

³⁹⁴ Hernando de los Rios Coronel, “Memorial,” Blair and Robertson, 19: 203 – 204.

³⁹⁵ Mercene, 2; Bankoff, 32 – 48.

month, which was not always paid.³⁹⁶ Conscriptio into a woodcutting gang was a death sentence for many *Indios* and the harsh demands were in no way abated after two centuries of royal decrees ordering against overwork and nonpayment of labor. The 1782 report of Ciriaco González Carvajal is particularly illustrative of the appalling conditions typically experienced by *Indios* in woodcutting gangs as late as two centuries after Spain's arrival.

The cutting of wood is the most difficult and arduous of labors because they work from four in the morning to eight at night. They are not given time to eat and rest, are poorly fed, exposed to the sun and wind in unpleasant, harsh and mountainous areas without any comforts, defenses or shelter for the few hours they are allowed to sleep. They must pay for the threshing of their rice and for the water buffalo which bring it to them, and, then, if they do not fall ill and are fortunate enough to complete the thirty days of work which is require of them, they end up with a salary of only thirteen reals, and for the water buffalo some of them must provide to haul the wood, they are only paid seven reals, which is only a *quartilla* a day, despite the regulation that they are to receive one-half a real a day.³⁹⁷

Because woodcutting was such a lengthy and grueling commitment the colonial government tended to draw laborers from those provinces that were not key rice growing regions. For example, Pampanga was such an important rice basket for the colony that its inhabitants were rarely subjected to labor for shipbuilding or woodcutting.³⁹⁸ On more than once occasion Spaniards conscripted so many woodcutters and worked them for so long that rice

³⁹⁶ Phelan, *The Hispanization of the Philippines*, 99.

³⁹⁷ Roth, 116. Roth takes this quotation from "A report on the general condition of the *Islas Filipinas*," 20 April 1586, in Licuanan and Llavadro, 4: 360; "Letter of Doctor Santiago de Vera," 26 June 1586, in Licuanan and Llavadro, 4: 391.

³⁹⁸ "The province which, in all this island of Lucon, produces most grain is that called Pampanga... This city [Manila] and all this region is provided with food—namely, rice, which is the bread here—by this province; so that if the rice harvest should fail there, there would be no place where it could be obtained." Francisco de Sande, "Relation of the *Filipinas Islands*," 7 June, 1576, Blair and Robertson 4: 80.

harvests were disrupted, which led to the 1608 decree by Philip III that explicitly forbade assigning labor duties that would interfere with the rice harvest.³⁹⁹

While *Indios* did not leave a written record of the abuses they suffered in the shipyards and woodcutting gangs, one can make inferences from their actions and resistance to working for the Manila Galleons. Of perhaps equal value are the impassioned writings of those handful of Spaniards who either sympathized with the plight of the *Indios* or who were simply outraged by the abuses that they witnessed—which, again, occurred in most every case in shipyards and woodcutting gangs. Workers unfortunate enough to be selected for shipyard labor often sought a means of escape. The only legally allowable escape was to pay one's way out of the labor obligation of the *polo y servicios*, but few could afford the fee to fund a replacement worker, which ran around ten pesos in the late sixteenth century and which could be higher if the local colonial official (*alcalde mayor*) overseeing labor conscription was corrupt.⁴⁰⁰ Because many *Indios* did attempt to pay their way out of laboring for the galleons, abuse of the conscription system was rampant. Many provincial officials and *datu*s charged with managing labor conscripts called upon far more woodcutters than were needed simply to collect more bribes from the subject population.⁴⁰¹ It was often the case that *Indios* would indent themselves as slaves to their *datu* rather than serve as labor for the Spanish. In cases, entire communities revolted en masse to avoid laboring for galleon construction. When in 1649 Governor Diego Fajardo sought new shipyard laborers and woodcutters from the Visayas—presumably because

³⁹⁹ "...it would greatly benefit God's service and mine that the natives of those islands be relieved of the vexations which ordinarily befall them in cutting wood and in other personal services—they being at times put in workgangs at planting and harvest times, the result being that their own lands are neglected..." Cushner, *Spain in the Philippines*, 118.

⁴⁰⁰ Paying to be excused from labor service was known as the *falta*. The *falta* was estimated by charging a set amount for each day of labor that was to be excused. Blair and Robertson, 9: 71 – 72. See also, Cushner, *Spain in the Philippines*, 117.

⁴⁰¹ Cushner, *Spain in the Philippines*, 118.

the provinces surrounding Manila were overworked following the flurry of shipbuilding during the Hispano-Dutch War—the prospect of having to labor for so long and so far from their homes inspired the outbreak of the Sumuroy rebellion.⁴⁰² With the tacit aid of a local missionary network, *Indios* throughout the Visayas remained in open rebellion against the colonial government well into 1650. Later, under the administration of Governor Manrique de Lara, excessive labor demands made in the all-important province of Pampanga led to a revolt of about 330 *Indios* who, the governor complained to the king, through their protests had disrupted the completion of the galleons *Victoria* and *San Joseph*.⁴⁰³ What is most telling about the demands of shipyard labor was not only that it inspired the rebellion itself, but once the rebellion was put down those *Indios* that were not put to death were sent to the shipyards as punishment! The role of the religious in assisting *Indios* in avoiding shipyard labor, and even in overtly assisting labor revolts in some cases, was made clear from as early as 1606. Pedro de Acuña, after announcing his intention of establishing a shipyard on the Pangasinian coast, soon discovered that the forest which was to supply the new shipyard with timber had been burned in protest, thus making the enterprise pointless. It was widely suspected for decades afterwards that local Christian missionaries were responsible for the fire.⁴⁰⁴

It was not only overwork that threatened the wellbeing of *Indios* and drove some missionaries to object to shipyard and woodcutting labor. As was almost always the case, *Indios* were not paid their promised wages. Underpaying or completely withholding wages made *Indio* shipyard and woodcutting labor a tremendous cost-saving tool for Spaniards in the Philippines but added a great deal to the misery and suffering of their subjects. Multiple royal decrees issued

⁴⁰² Cushner, *Spain in the Philippines*, 120.

⁴⁰³ Cummins and Cushner, “Labor in the Colonial Philippines,” 117 – 148

⁴⁰⁴ Fajardo, “Letter to King Philip IV,” Manila, 4 August, 1650, Blair and Robertson, 20.

from the beginning of the conquest reminded administrators in the Philippines that *Indios* were to receive a “just wage” for their work under the *polo y servicios*.⁴⁰⁵ Spaniards in the Philippines, following the traditional logic of *obedézcase pero no se cumpla* did not pay what they did not absolutely have to, and so *Indio* laborers often went by with the bare minimum or nothing at all. “In theory,” writes Nicholas Cushner, “logwood cutters and shipyard laborers received a salary.”⁴⁰⁶ This was a meager sum when it was paid out. Alonso Sánchez, writing in 1586, reported to Philip II that regular shipyard laborers received only four reals a month.⁴⁰⁷ Sebastián de Pineda reported in 1619 that wages were up to 8 reals a month.⁴⁰⁸ Spaniards it seemed did recognize and reward skilled labor amongst the natives; they paid as much as 4 pesos a month for a skilled carpenter.⁴⁰⁹ Foremen were the exception however. What is most revealing about de Pineda’s *relacion* however is his admission that at the time of his writing the report that worker’s wages in the shipyards of Manila had not been paid in five years.

Domingo Salazar complained to the king that those in charge of orchestrating the *polo* labor often never paid out due wages.⁴¹⁰ Through a combination of nonpayment of wages and the forced purchase of foodstuffs at below market rates (the *vandala*), Spaniards in the Philippines had run up a considerable debt to their subjects. In 1655 it was estimated that 150,000 pesos were owed to *Indio* subjects just for unpaid wages.⁴¹¹ The total debt of the Manila treasury in the

⁴⁰⁵ Cushner, *Spain in the Philippines*, 115, 118. The litany of decrees include, Cedula of Philip II, 7 November 1574, Cedula of Philip III, 24 November, 1601, Cedula of Philip III, 26 May, 1606.

⁴⁰⁶ Cushner, *Spain in the Philippines*, 120.

⁴⁰⁷ Cushner, *Spain in the Philippines*, 121.

⁴⁰⁸ Cushner, *Spain in the Philippines*, 121.

⁴⁰⁹ Cushner, *Spain in the Philippines*, 121.

⁴¹⁰ They compel the Indians to work at tasks in the service of your Majesty, paying them little, and that irregularly and late, and often not at all.” Domingo de Salazar, “Affairs in the Philippine Islands,” Blair and Robertson, 5: 221.

⁴¹¹ Cummins and Cushner, “Labor in the Colonial Philippines,” 186.

mid seventeenth century ran to over a million pesos.⁴¹² Accruing debt was an advantage in this case, as the construction of a single ship often involved the saving of tens of thousands of pesos through the non-payment of wages. When the *San Diego* was completed in the mid seventeenth century Casimiro Díaz reported that while the vessel “had cost the King 60,000 pesos, the cost to the natives was 150,000 pesos.”⁴¹³ In the latter years of the sixteenth century, the average cost to the Crown was even lower. A 500-ton ship was completed in 1587 for a mere 8,000 pesos, while the *Indios* shouldered the rest of the cost through labor services that went uncompensated.⁴¹⁴

The debt incurred through the withholding of wages was combined with the goods (mainly rice) forcibly purchased from natives through the *vandala*. By obtaining goods at below market rate (or for no cost whatsoever) Spaniards in the Philippines were able to greatly cut back colonial expenses. The *vandala* became a critical means of supporting the Spanish colony, especially in the face of Dutch blockades when food was scarce and/or too expensive. By 1616 the Spanish government owed the natives of Pampanga alone 70,000 pesos in payments for goods forcibly repossessed. By 1660, Pampanga was owed 220,000 pesos. One can understand why indigenous rebellions protesting both the *polo* and *vandala* were common during much of the seventeenth century.⁴¹⁵ Nevertheless, both these systems of oppression were instrumental in making the Philippines a fiscally viable undertaking for the Spanish.

⁴¹² Cummins and Cushner, “Labor in the Colonial Philippines,” 186.

⁴¹³ Quoted from Schurz, *The Manila Galleon*, 197.

⁴¹⁴ Quoted from Schurz, *The Manila Galleon*, 197.

⁴¹⁵ Gregorio F. Zaide, *Philippine Political and Cultural History: The Philippines Since Pre-Spanish Times*, vol. 1 (Manila: Philippine Education Company, 1949), 343. Zaide cites the following *Indio* revolts having occurred in protest of forced labor and tribute: “Magalat’s Revolt in 1596, the Gaddang Revolt in 1621, the Caraga Revolt in 1630, the Cagayan Revolt in 1639, Sumuroy’s Revolt in 1649-50, Malong’s Revolt in 1660-61, Dagohoy’s Revolt in 1744-1829, Silang’s Revolt in 1762-63, and Palari’s Revolt in 1762-64.”

Though instances of open rebellion are dramatic and worth analysis, they were but one form of protest. Religious officials and other *Indio* sympathizers also took up the pen in protest and to make their objections known. Perhaps the most famous case of a written complaint regarding *Indio* abuses connected to shipyard labor and woodcutting was authored by Slavador Gómez de Espinosa y Estrada, a high-court judge in Manila in the seventeenth century. The vitriolic and impassioned *Discurso Parenético*—of which 140 copies were published in Manila in 1657—was a lengthy tally of all the abuses endured by the *Indios* of the Philippines while laboring for the *polo y servicios* as well as the many cases of excessive taxation. But Gómez de Espinosa went beyond mere shipyard abuses and included a litany of misdeeds carried out by friar missionaries and the misdeeds that often occurred when *Indios* were used for personal services as well. Espinosa's *Discurso Parenético* ran over a hundred pages and cross referenced each type of abuse with the corresponding royal decrees that forbade such practices in the Philippines. He included a great many references to scripture and religious authorities to further backup his objections. The reaction in the Philippines was swift; clerics and government officials alike generated a wave of sermons, speeches, and published papers in response. Many argued against the work by citing the damage that had been done by the pen of las Casas in the New World. Missionaries demanded that all the copies of the *Discurso* be collected and destroyed on the grounds that the fledgling Catholic faith would lose moral authority amongst converted *Indio* communities. Other accusations made Espinosa out to be either an agent of the devil or a seeker of fame. Although religious orders often stood up against the colonial government as defenders of *Indios*, it would appear they were similarly guilty of abuse and just as unwilling to ameliorate the situation. Historians J. S. Cummins and Nicholas Cushner have done a great service in resurrecting the *Discurso*. The work itself is rare. Following its publication and the subsequent

objections to its circulation, “as many copies as possible were recovered and all were burnt in the orchard of one of the Manila priories...”⁴¹⁶ Indeed, only three complete copies are extant.⁴¹⁷

The sum total of these abuses inflicted upon native laborers, namely overwork and underpay in shipyards but also on religious estates, necessarily worked to produce a cumulative benefit for the colonial finances in the Philippines. By passing off the burdensome labor obligations of shipbuilding and repair onto the local inhabitants of the Manila Bay region and through the systematic underpayment (or nonpayment as was often the case) of laborers, the Philippines became the cheapest and most productive region within the entire Spanish empire to construct oceangoing vessels. As one memorial cited, “The Indians of these islands are already very skillful at making ships and fragatas with the assistance and labor of a few Spanish carpenters, who furnish them with plans and a model; they make them so cheaply that a vessel of five or six hundred toneladas can be built for three or four thousand pesos, as some have already been.”⁴¹⁸ Compare these expenses and glowing reports to the costs and frustrations voiced by Cortés and others who attempted to construct ships in the New World using local labor and materials.

The Environmental Resources of the Philippine Archipelago

The exploitation of *Indio* labor is only one side of the equation. The advantages Spain gained in exploiting labor were combined with the wealth of biological resources available in the Philippines for shipbuilding. Timber and abacá fibers—the two most important components—

⁴¹⁶ Cummins and Cushner, “Labor in the Colonial Philippines,” 196.

⁴¹⁷ Cummins and Cushner, “Labor in the Colonial Philippines,” 186.

⁴¹⁸ De Vara, “Memorial,” 26 July, 1586, Blair and Robertson, 6: 206.

were cheaper in the Philippines, more abundant, and of a superior quality than anywhere else in Europe or throughout Spain's empire.

Colonial botany of the early modern period has been a growing field in professional historical scholarship lately. However, most all of the research in this vein has focused on spices, medicines, and other high-value exotics while comparatively little has written on the role of utilitarian and bulk items, such as timber and fibers.⁴¹⁹ I argue that notions of early-modern bio-prospecting in European colonies should just as readily apply to items such as timber, which were of central importance to sustaining colonization and maritime connections, as they do to the far more studied "botanical exotics." Aside from labor, nothing was more important to the creation of a productive shipyard than securing access to high-quality timber at the lowest possible cost. Both elements, labor on the one hand and timber on the other, were two sides of the same coin, so to speak. Labor and timber formed the foundational package upon which shipbuilding was made possible in the most far flung of all Spain's colonial holdings. As Chapters 2 and 3 have shown, high quality timber was the single most vital resource in the construction of ocean-going vessels and when it could not be secured readily and at reasonable cost, problems ensued. A lack of quality timber in sufficient quantities made shipbuilding along the Pacific coast of New Spain fantastically expensive and unproductive, thus hindering Spain's Pacific endeavors for many decades. For the Spanish Philippines to develop into a colony of any value, a shipyard with adequate stocks of timber would need to be developed. As it turned out, the Philippines, and the island of Luzon in particular, were home to many varieties of superior timber for shipbuilding.

⁴¹⁹ Paula De Vos, "The Science of Spices," 399 – 427; Schiebinger and Swan; Jack Kloppenburg Jr., ed., *Seeds and Sovereignty: The Use and Control of Plant Genetic Resources* (Durham, NC: Duke University Press, 1988); Schiebinger, *Plants and Empire*.

One cannot overstate the importance of timber to sixteenth and seventeenth century seafaring and global commerce. By the sixteenth century, those European kingdoms with sizable navies and merchant fleets to maintain were already feeling the pinch of timber scarcity, especially when it came to oak, the most utilized timber for European shipbuilding.⁴²⁰ Throughout the coastal regions of Europe the most accessible stocks of timber had been depleted, particularly in the Mediterranean. By the latter half of the sixteenth century most every shipbuilding center in Europe was importing their timber, which greatly increased the cost of producing ships.⁴²¹ As timber became ever scarcer, maintaining effective naval power and fostering maritime commerce became acutely dependent upon access to timber at the lowest possible cost. By 1600 the leading source of shipbuilding timber came from Northern Europe via the Baltic trade. The fact that the Dutch had built up an economy based around the control of Baltic shipping, and therefore the control of Europe's timber, goes a long way in explaining the rapid rise of the Dutch and the *Vereenigde Oost-indische Compagnie* (VOC) on the world's oceans.⁴²² Spain, France, and England were unable to rise to effectively challenge the Dutch hegemony at sea in the early seventeenth century partly due to the relatively high costs of shipbuilding in their home ports, which stemmed from the fact that much of their timber had to be imported (often from the Dutch) at tremendous cost.

⁴²⁰ Fernand Braudel, *The Mediterranean and the Mediterranean World in the Age of Philip II*, translated by Sian Reynolds (New York: Harper & Rowe, 1972), I: 131.

⁴²¹ Frederic Lane, "Venetian Shipping During the Commercial Revolution," in *Venice and History* (Baltimore: Johns Hopkins University Press, 1966), 21.

⁴²² The rise of the Dutch as a global power in the early seventeenth century has been a long-debated issue that has no single explanation. However, seeing as much of the Low Countries' success was predicated upon seaborne commerce, one must not leave timber out of the equation of Dutch success. Immanuel Wallerstein writes that, "Because the Dutch had an edge in Baltic trade, they became the staple market for timber. Because they were the staple market for timber, they reduced shipbuilding costs and were technologically more innovative. And in turn they were thus still better able to compete in the Baltic trade." Wallerstein, *The Modern World System*, .

Building large sailing vessels like the Manila galleons was no trifling matter. The largest of such vessels could require up to 2,000 oak trees for their construction. It is estimated that such a quantity of timber would require “50 acres of woodland.”⁴²³ Michael Barkham, working from Basque shipbuilding contracts, has estimated that every 100 tons of shipping capacity required eighty-three oak trees.⁴²⁴ David Goodman, writing of Spanish shipbuilding in the sixteenth century more generally cites a figure of 900 oak trees for a 560-ton vessel built in the Basque region and 200 – 300 mature pines for a galleon built in Barcelona.⁴²⁵ Such demands on timber supply led many of the shipbuilding centers and maritime states of Europe to develop strict government control over forests in the early modern period. For Spain it was no coincidence that the northern Basque coastline was home to Spain’s largest oak forests and that the same region produced 90% of Castile’s sailing ships.⁴²⁶ Strong timber was the *sin qua non* of any shipbuilding center and therefore became a vital state-protected resource throughout Europe.⁴²⁷ While a great deal of historical research has investigated shipbuilding and timber in Europe in the early modern era, relatively little has been done to explore the creation of shipyards in European overseas colonies and the methods of forestry management in colonial Asia and the

⁴²³ Wallerstein, *The Modern World System II*, 43.

⁴²⁴ Michael Barkham, *Report on 16th-Century Spanish Basque Shipbuilding c. 1550 to 1600* (Ottawa: Parks Canada Manuscript Report Series, 1981), 20.

⁴²⁵ Goodman, 78 – 79. See also, Phillips, 79.

⁴²⁶ Wing, 120 – 121.

⁴²⁷ The historical literature on early-modern European forestry as it is connected to both shipbuilding and the consolidation of state power is vast. Some of the key works in the field include, Conrad Totman, *The Green Archipelago: Forestry in Pre-Industrial Japan* (Berkeley: University of California Press, 1989); Karl Appuhn, *A Forest on the Sea: Environmental Expertise in Renaissance Venice* (Baltimore: Johns Hopkins University Press, 2009); Paul Warde, “Fear of Wood Shortage and the Reality of the Woodland in Europe, c. 1450 – 1850,” *History Workshop Journal*, 62 (2006): 28 – 57; Joachim Radkau, *Nature and Power: A Global History of the Environment*, translated by Thomas Dunlop (New York: Cambridge University Press, 2008); Paul W. Bamford, *Forests and French Sea Power, 1660 – 1789* (Toronto: University of Toronto Press, 1956); Phillips.

Americas in the sixteenth and seventeenth centuries.⁴²⁸ As chapter three illustrated, the attempt to create a viable shipbuilding industry along the Pacific coast of New Spain proved unworkable on account of high costs stemming from scarce labor, inferior timber, and a general dearth of needed components and materials.

Transporting such volumes of timber across the world's oceans to sustain European shipbuilding efforts in the even more distant Philippines was a logistical and fiscal impossibility for the kingdom of Spain. If the Philippines were to develop a trans-Pacific link with New Spain, it would have to do so with Pacific resources. And let us not forget that timber was only one of a wide range of materials and components needed for ship construction. As chapter 2 outlined in some detail, rope, sailcloth, iron fittings, chains, anchors, nails, pumps, and many other items besides were all crucial components.⁴²⁹ Furthermore, once a ship was completed many processes and materials were required to seal the hull against rot, barnacles, shipworms, and general wear and tear. Filling in the gaps between planks necessarily required a hemp-like material to be laid into the seams and an accompanying mixture of pitch or tar. To fully seal and protect the hull—which was a crucial precaution to take if the vessel were to be sailing in warm, shipworm-infested waters—any number of measures could be taken, from the application of resin-soaked

⁴²⁸ Studies of colonial forestry in Asia tend to focus almost exclusively on British India of the eighteenth and nineteenth centuries. One can point to only a few works on the subject of colonial shipbuilding and timber management in the sixteenth century. For Spain in particular, Ovidio Ortega Pereyra, *El Real Arseanal de la Habana: La Construcción Naval en la Habana Bajo la Dominación Colonial Española* (Havana: Editorial Letras Cuanas, 1998); Reinaldo Fuentes Monzote, *From Rainforest to Cane Field in Cuba: An Environmental History since 1492*, translated by Alex Martin (Chapel Hill: University of North Carolina Press, 2008). More generally, John F. Richards, *The Unending Frontier: An Environmental History of the Early Modern World* (Berkeley: University of California Press, 2003).

⁴²⁹ For the various components required in European ship construction, see Smith, 78 -82.

cloth to the fastening of a thin lead sheathing below the water line.⁴³⁰ This is all to say that the establishment of a viable shipyard required vast inputs of labor and materials, paramount of which was timber.

That the earliest Spanish visitors to the Philippines found themselves in desperate need of all of these materials to repair, rebuild, or construct new vessels is evident from the many reports and correspondence sent from the Philippines to New Spain up to 1571.⁴³¹ Timber does not appear on such requisitions for obvious reasons of logistical supply and the impracticality of shipping timber beams across the Pacific. For timber, Europeans in Southeast Asia would have to turn to the local environment. And just as in Europe, not any timber would do. The demands of seafaring required timber of a particular degree of density, strength, and elasticity.⁴³² What Spaniards needed was a Philippine variety of timber that was roughly equivalent to oak or pine. Although we have no evidence that any of the Spanish expeditions to the Philippines prior to 1571 took into account the availability or types of timber when assessing the value and future potential of the archipelago as a colonial outpost, we do know that following the settlement of Manila and the commencement of commerce with the Chinese in 1571 there began to appear a number of Spanish reports specifically addressing both the availability of shipbuilding timber and its superior characteristics versus European oak and pine. By the close of the decade timber had been recognized as a natural resource of paramount importance and value. And by the outbreak of the Hispano-Dutch war in the early seventeenth century, when shipbuilding became

⁴³⁰ Smith, 82 – 85; Juan Escalante de Mendoza, *Itinerario de navegación*, 38. For a summary of some of the more outlandish techniques and experiments for protecting hull planks in sixteenth century Europe, see G. V. Scammell, “European Seamanship in the Great Age of Discovery,” 361.

⁴³¹ “Requisitions of Supplies for the Spanish Forces in the Philippines, c.1570,” in Blair and Robertson, 3: 132.

⁴³² Bankoff, 33.

the first line of defense against a VOC seizure of Manila, timber in the Philippines became as valued as it was in Europe, if not more so.

Numerous reports issued from the Philippines following the conquest of Manila in 1571 include discussions of the various types of wood to be found, their ideal applications—no doubt learned from observing native shipbuilders—as well as the location of specific wood types. In a matter of mere decades the state of the Philippine forests and the availability of specific timbers for shipbuilding became an ever more frequent feature of reports issued by the Governor General of the Philippines to the King of Spain. In a letter to Philip II dated 1575, Juan Maldonado, an official under Governor Francisco de Sande, surmised that the Philippines was of great strategic worth to the crown mainly on account of the quantity and quality of Luzon’s timber, which he estimated there was enough of to construct as many as four galleons a year.⁴³³ A memorial written in 1586 went a step further and recognized that the abundant supplies of timber could be effectively combined with *Indio* labor to build ships quickly and cheaply.⁴³⁴ The memorial also makes note of “*anabo*, which is an herb like hemp, of which rigging is made for ships.”⁴³⁵

Governor Francisco de Sande, writing in 1576, just four years after the death of Miguel López de Legazpi, similarly recognized the benefits of joining *Indio* labor and the local supply of timber.

There is in these islands and abundance of wood and of men, so that a large fleet of boats and galleys may be built...to my way of thinking, therefore, the ship that would cost ten thousand ducats in Guatemala, and in Nueva España thrity [thousand], can be made here for two or three [thousand], should strenuous efforts be employed.⁴³⁶

⁴³³ Juan Maldonado, “Letter to Filipe II,” 1575, Blair and Robertson, 3: 303

⁴³⁴ Santiago de Vera, “Memorial to the Council of Citizens of the Filipinas Islands,” 26 July, 1586, Blair and Robertson, 6: 206.

⁴³⁵ De Vara, “Memorial,” 26 July, 1586, Blair and Robertson, 6: 205. This could possibly be a reference to *abacá*.

⁴³⁶ Francisco de Sande, “Relation of the Filipinas Islands,” 7 June, 1576, Blair and Robertson, 4: 74.

Governor Sande recognized the importance of this reduced cost in shipbuilding in order to spare the great expense of building and outfitting ships in New Spain.⁴³⁷ It is worth noting that Sande explicitly compares Philippine shipbuilding costs to that in the New World. Writing again in 1577, Governor de Sande expands his estimated savings in shipbuilding through *Indio* labor and local timber to say that “God permitting, we shall build ships here which would be worth in Nueva Espana one hundred thousand ducats, and which cost here less than fifteen.”⁴³⁸ What a sudden change in the perceived value of the Philippines, especially considering that in 1569 Legazpi deemed the islands to be “of little importance.”

Perhaps the best example of Spanish concern over Philippine timber as it applied to shipbuilding appears in the 1619 report of Captain Sebastián de Pineda.⁴³⁹ His report is of particular interest as de Pineda was amongst the first naval officers sent to the Philippines who demonstrated a keen eye for surveying the natural resources of the archipelago for maritime and wartime applications. His report to the King, which was essentially a status report on the Hispano-Dutch War in Asia, devotes the lion’s share of attention to timber and shipbuilding. The language of de Pineda’s report indicates that he had thoroughly recognized the value of local timber as it pertained to both maritime commerce and defense. What is more, the details of de Pineda’s report reveal that Spaniards such as himself had become acutely aware of the specific varieties of timber available throughout the Philippines, their characteristics, and their ideal

⁴³⁷ Francisco de Sande, “Relation of the Filipinas Islands,” 7 June, 1576, Blair and Robertson, 4: 77. Governor Sande states that building ships in the Philippines is necessary “so that the expense at Acapulco, in Nueva Espana, might cease. All the work that is done there is thrown away; for the vessels from Nueva Espana alone detain the workmen here in repairing them, and prevent them from building new ones.”

⁴³⁸ Francisco de Sande, “Relation and Description of the Philipinas Islands,” 8 June, 1577, Blair and Robertson, 4: 117.

⁴³⁹ “Petición de Sebastian de Pineda de Puesto en la armada qu va a Filipinas,” (1619) Archivo General de Indias, Filipinas, 38, n. 12. Accessed via Portal de Archivo Españoles (PARES) pares.mcu.es.

applications. Such information no doubt came from the knowledge already accumulated by the indigenous population, who had been engaged in shipbuilding and seaborne commerce and warfare for a millennium or more and had named each variety of timber.

Identifying specific species of trees of the Philippines using sixteenth century records is exceedingly difficult. The patchwork of languages throughout the archipelago meant that any one particular species of tree had at least a dozen names just in Luzon. To take one example, the timber commonly called *Tanguile* (*Shorea polysperma*) which was used by *Indios* in the construction of small boats like *caracorás*, has variously been recorded as *Tanguile*, *Tanguili*, *Panonsongin*, *Tangile*, *Tangili*, *Balacbacan*, *Babanganon*, *Bunga*, *Tamug*, *Araca*, and *Adamuy*.⁴⁴⁰ To limit the confusion, when identifying specific tree species I will indicate the modern taxonomic name, and include additionally only their modern common name, and/or the name used in Spanish records and accounts. In almost every case however, Spaniards identified and recorded a tree species in the Philippines by using indigenous words or some confused version of what they understood to be its name.

In the opening line of his comprehensive report on Philippine timber and shipbuilding, de Pineda cites a local wood called *maria* as being used for the futtock-timbers (*legacones*) for all the “galleons and galleys and pataches” built in the Philippines.⁴⁴¹ *Maria* was a strong and sturdy wood and was ideal for use in building the main structural elements of a ship’s hull. De Pineda goes on to claim that *maria* was so strong that it easily repelled cannon shot and “once a nail was

⁴⁴⁰ Rolland Gardner, *Mechanical Tests, Properties, and Uses of Thirty Philippine Woods* (Manila: Department of the Interior, Bureau of Forestry, 1906), 55.

⁴⁴¹ The following section is based on “Petición de Sebastian de Pineda de Puesto en la armada queva a Filipinas,” (1619), PARES, AGI, Filipinas, 38 no. 12, accessed December 2, 2013. *Maria* is likely *Calophyllum inophyllum*, a species not present in Europe but plentiful throughout the Philippines.

hammered into it, it is impossible to withdraw it without breaking it.”⁴⁴² De Pineda then identifies another wood called *arguijo* (guijo),⁴⁴³ which growing straight and very tall was ideal for use in the construction of the all-important keels and masts. Third in his list is *laguan* (lauan),⁴⁴⁴ which was noted for being resistant to shipworms, a most valuable trait for a wood to have. As such, *laguan* was used in nearly all the hull planking and sheathing of all the ships built in the Philippines. A fourth timber, *banaba*,⁴⁴⁵ was noted for being marginally resistant to shipworms and was somewhat hard to come by, as such *banaba* was somewhat less favored as hull planking than *laguan* but nonetheless utilized when it could be found. De Pineda goes on to identify a wood called *maria de Monteguas*⁴⁴⁶ which was recorded as being distinct from *maria* and was used in deck planking and for fashioning oars. *Palo Maria* was yet another variety of timber that was reddish in color and used for masts whenever available.⁴⁴⁷ There was also the pale colored *dongon*⁴⁴⁸ (or *dungon*) which was renowned for its strength. Because *dongon* was difficult to work with tools it was used for smaller components aboard ship like dowels, chocks, tackle, and the coamings of hatchways.

While Sebastián de Pineda’s report is amongst the more detailed regarding timber usage in the Philippines, there are many more Spanish accounts besides that address the advantages offered by the timber of the archipelago in a more general way. Antonio de Morga’s *Sucesos de las Islas Filipinas* of 1609 relates that in the Philippines,

⁴⁴² That many of the woods used in galleon construction in the Philippines were bulletproof was a claim repeated by many foreign observers who participated in attacks on Manila galleons and were surprised by their durability.

⁴⁴³ *Shorea Guiso*

⁴⁴⁴ *Dipterocarpus thurifera*.

⁴⁴⁵ *Lagerstoemia speciosa*.

⁴⁴⁶ Based on de Pineda’s description, this wood might in fact be some variety of *Palo Maria*.

⁴⁴⁷ *Calophyllum inophyllum* and *Calophyllum wallichianum* were used interchangeably and misidentified by the Spanish as being the same species. See Gardner, 61.

⁴⁴⁸ *Tarrietia sylvatica*

...there is a large supply of lumber, which is cut and sawed, dragged to the rivers, and brought down by the natives. This lumber is very useful for houses and buildings, and for the construction of small and large vessels. Many very straight thick trees, light and pliable, are found, which are used as masts for ships and galleons. Consequently, vessels of any size may be fitted with masts from these trees, made of one piece of timber, without its being necessary to splice them or make them of different pieces. For the hulls of the ships, the keels, futtock-timbers, top-timbers, and any other kinds of supports and braces, compass-timbers, transoms, knees small and large, and rudders, all sorts of good timber are easily found; as well as good planking for the sides, decks, and upper-works, from very suitable woods.⁴⁴⁹

There can be no question that the woods available for ship construction were stronger and more durable than those available in either Europe or New Spain. Many varieties of Philippine timber were recognized by the Spanish to be particularly resistant to rot and shipworm infestation. More revealing, modern stress tests have shown that the maximum fiber strength of many Philippine timbers had an elastic limit far beyond the common timbers used for shipbuilding in the Americas or Europe. A survey conducted by the United States colonial regime in the early twentieth century found that where redwood and pine could endure pressures in the range of 5,500 – 5,800 pounds per square inch along the grain, Philippine timbers like *aranga*, *dungon*, *molave* and *guijo* withstood 8,000 to 12,000 ppsi.⁴⁵⁰ When subjected to cross bending stresses Philippine timbers fared even better. But it was not strength alone that defined a superior wood but also its malleability and workability with saws and adzes. Here again, Spaniards were quick to note the superiority of Philippine timbers.

Evidence of the widespread use of local timbers in galleon construction can be found outside of the archives. The underwater excavation of the galleon *San Diego*, which sunk in 1600, has revealed a wealth of information on the structural elements of Philippine-built

⁴⁴⁹ de Morga, *Sucesos de las Islas Filipinas*, Blair and Robertson 16: 86 – 87.

⁴⁵⁰ Gardner, 66.

galleons.⁴⁵¹ The keelson of the *San Diego* was found to be 17.5 meters long and fashioned from *Terminalia microcarpa*, an indigenous species to Southeast Asia commonly referred to as *kalumpit* in the Philippines. The timber met all the criteria shipbuilders desired, being “easy to work, relatively strong, and resistant to insects...”⁴⁵² Analysis of the keelson has revealed a number of metal pins indicating that the *San Diego* likely made extensive use of iron components and fixtures. Iron was obtained in Manila through the trade with mainland Asia, namely Ming China. The stringers of the *San Diego*’s hull were built from *apitong*, another Philippine timber very similar to *kalumpit*.⁴⁵³ The keel itself was made from *Bitaog* (*Calophyllum inophyllum*), another species of Philippine tree that was known to grow as large as several meters in diameter.⁴⁵⁴ Similarly, the planking, framework, rudder, and all other components of the *San Diego* have been found to be made from Philippine timbers.

Timber was but one of a wide range of raw materials necessary to build a sailing ship. Second to timber in importance was hemp fiber for making rope and rigging.⁴⁵⁵ The importance of good cordage is made clear in the numerous requisitions for materials that were sent out from the Philippines prior to 1571. One of the first official requests for men and materials to be sent to the Philippines from New Spain in 1568 lists first—above food and craftsmen—“30 quintales of

⁴⁵¹ Descroches, et. al.

⁴⁵² Descroches, et. al., 146.

⁴⁵³ Stringers are the main structural elements of the hull that run lengthwise, parallel to the keel and perpendicular to the ribs.

⁴⁵⁴ The researchers of the *San Diego* wreck note that the length of the keel, 23.73 meters, conforms almost exactly to 42 codos, a standard unit of measure in Spanish shipyards. This begs the question of how much Spanish expertise went into constructing the Manila galleons versus local designs and measurements. Descroches et. al., 146.

⁴⁵⁵ For an excellent survey of early modern cordage varieties and costs, see Martha Morris, “Naval Cordage Procurement in Early Modern England,” *International Journal of Maritime History* 11 (1999): 81 – 99. It is worth remembering the astonishing quantity and variety of ropes required aboard a ship, including bolt ropes, latchet lines, head ropes, shrouds, rattling, sounding lines, netting, lashing lines, hawsers, and cables.

cordage.”⁴⁵⁶ Importing the quantities of rope needed in the Philippines from either Europe or New Spain would not only have been too costly, but most ships making the run across the Pacific could not afford to give up such large amounts of cargo space to haul hundreds of pounds of rope. What is more, the few times that rope was imported from New Spain it was found to have had already deteriorated beyond use.⁴⁵⁷ Fortunately the Philippines had its own local variety of hemp which the indigenous population had long been utilizing to make rope for their own vessels. *Abacá* (*Musa textilis*), or “Manila Hemp,” would prove vitally important to Spain’s shipbuilding efforts in the archipelago.⁴⁵⁸ *Abacá* was cheap and easy to harvest, abundant, and when spun into rope offered many advantages over European varieties of rope and rigging. S. C. Kochhar’s compendium *Economic Botany in the Tropics* notes that *abacá* fibers “are light, resilient, durable and resistant to water, especially salt water; hence they are of special demand for marine cordage, ship caulking and in the fishing industry.”⁴⁵⁹ Indeed, *abacá* is now recognized as the strongest structural plant fiber in the world and its ability to withstand the corrosion of salt water that so quickly deteriorated European ropes and rigging made it the ideal replacement.⁴⁶⁰ *Abacá* is currently one of the world’s preferred natural plant fibers for rope and

⁴⁵⁶ “A list of what should be sent from Nueva España to Las Islas Filipinas thru Juan de las Ysla,” in Licuanan and Llavadro, vol. 2, 295.

⁴⁵⁷ Miguel Lopez de Legazpi, after receiving a shipment of rope from Vera Cruz, complained of its inferior quality. “Letter of Miguel López de Legazpi,” 11 August 1572, in Licuanan and Llavadro, vol. 2, 365-366.

⁴⁵⁸ *Abacá* is *Musa textilis*, a species related to banana that is native to the Philippines. The fiber is taken from the trunk of the plant, which is far more commercially valuable than the fruit of the plant. For an assessment of *abaca*’s importance to nineteenth-century industry and export in the Philippines, see Owen, “Abaca in Kabikolan”, 191 – 216. For an extended discussion of the various uses of *abaca* in Philippine as well as world history, see Elizabeth Potter Sievert, *The Story of Abaca: Manila Hemp’s Transformation from Textile to Marine Cordage and Specialty Paper* (Manila: Anteneo de Manila University Press, 2009).

⁴⁵⁹ S. C. Kochhar, *Economic Botany in the Tropics*, 2nd edition (New Delhi: Macmillan, 1998), 46.

⁴⁶⁰ Edlin.

the Philippines produces 90% of the world's supply.⁴⁶¹ De Pineda's report stressed that *abacá*, along with a second type of local fiber called *gamu*, was far stronger than European rope.

The rigging of the said Filipinas Islands is of two kinds: one, which was formerly used, is made from the palm called *gamu*, today used only to make cables, stays, and shrouds; the other is called *acaba*, and is a kind of hemp which is sowed and reaped like a plant in Piru and Tierra Firme called *bihau*. Abaca is much stronger than hemp and is used white and unpitched. This abaca costs twenty-four reals per quintal, and is made into rigging in Cabite [Cavite] by the Indian natives, in the sized and diameter required.⁴⁶²

That local types of rope could be used "white and unpitched" is significant. All types of rope for maritime applications in Europe had to be thoroughly treated with pitch or tar to ensure their strength and longevity, else they fray, rot, and become useless. Furthermore, not only was Philippine cordage strong, it was cheap. According to de Pineda, "the total cost per quintal of this native rigging is about fifty reals. That shipped from Nueva España...costs your Majesty two hundred reals per quintal."⁴⁶³

Abacá in the Philippines would prove to be of fundamental importance to the shipbuilding industry of not just the early modern period, but well into the twentieth century. By the time of the US occupation of the archipelago at the close of the nineteenth century, government surveyors found that *abacá* "comprised approximately two-thirds of the total export trade of the islands."⁴⁶⁴ A number of US government reports from the period of early US

⁴⁶¹ Kochhar, *Economic Botany in the Tropics*, 47.

⁴⁶² de Pineda, "Philippine Ships and Shipbuilding," 26 May, 1619, Blair and Robertson, 18: 168; PARES.

⁴⁶³ While production of *abacá* rope was cheap, it was (and continues to be) a rather labor intensive process. The fibers of the *abacá* plant must be pulled and separated no later than 48 hours after cutting the plant, and this would have been done by hand in the field. Kochhar, *Economic Botany in the Tropics*, 48.

⁴⁶⁴ M. M. Saleeby "Abacá (Manila Hemp) in the Philippines," in *The Philippine Islands in the Panama Pacific International Exposition* (San Francisco, CA: Bureau of Printing, 1915), 1 – 5. For an analysis of *abacá* harvesting and rope production in the Philippines during the eighteenth

occupation found that *abacá* was ideally suited to making cordage for maritime applications on account of its water resistance.⁴⁶⁵ The *abacá* plant closely resembles a banana plant, with a grouping of dense stalks made up of overleaping sheaths with broad leaves. The practice of harvesting the sheathing of the *abacá* stalks to make rope had been practiced by local communities long before the arrival of the Spanish. To make rope, *Indios* would first separate the fiber threads from the layers of sheathing around the stalk and then separate out the individual strands of fibers and set them out to dry. A US government report noted that indigenous communities using primitive methods of extraction could produce half a ton of fiber from 400 to 500 *abacá* plants.⁴⁶⁶ While much of the evidence we have for abaca production comes from the nineteenth and twentieth centuries, it would appear that much in the way of how the plant was grown, harvested, and manufactured into rope has little changed since the time of Spanish occupation. Kabikolan (the Southeast peninsula of Luzon) was and continues to be the ideal environment within the Philippines to grow abaca, having a high annual rainfall and fertile mountainous slopes.⁴⁶⁷ However, because Katikolan was not subjugated until the late seventeenth century (and even then it remained a backwater for another century), *abacá* supply to the Cavite shipyard likely came from various and diffuse locations throughout Luzon and not a single dedicated province.

and nineteenth century, see Norman G. Owen, “Abaca in Kabikolan: Prosperity without Progress,” in *Philippine Social History: Global Trade and Local Transformations*, 191 – 216.

⁴⁶⁵ Saleeby’s report states that, “Abacá is the premier cordage fiber in the world. It is a structural (hard) fiber obtained from the outer layers of the overlapping leaf sheaths which form the stalks of the abaca plant. It is very light, strong, and durable. When properly extracted and dried, it is also of a white, lustrous color. One particular feature of the *abacá* fiber which emphasizes its superiority over all other fibers of its class is its great strength and resistance to the action of water, hence its particular adaptability for marine ropes.” Saleeby, “Abacá (Manila Hemp) in the Philippines,” 1.

⁴⁶⁶ Saleeby.

⁴⁶⁷ Norman G. Owen, *Prosperity without Progress: Manila Hemp and Material Life in the Colonial Philippines* (Berkeley: University of California Press, 1984), 7 – 41.

Sail cloth was yet another component of a ship which was badly needed in the Philippines and which became available through local raw materials and an already developed sailcloth weaving industry at Ilocos. Again, Sebastián de Pineda reports that,

The canvas (lienço) from which the sails are made in the said islands is excellent, and much better than what is shipped from España, because it is made from cotton. They are certain cloths which are called mantas from the province of Ylocos, for the natives of that province manufacture nothing else, and pay your Majesty their tribute in them. They are doubled, and quilted with thread of the same cotton. They last much longer than those of España.⁴⁶⁸

Similar again to both timber and cordage, Philippine sailcloth was not only of a superior quality, but was ultimately cheaper to obtain than from either New Spain or Europe. De Pineda reports that,

one vara of this cloth (lienço) costs less than one-half real. The thread of the same cotton...costs twenty reals per arroba. The cloth brought from Nueva España, when set down in the city of Manila, six reals per vara. Also the thread shipped from Nueva España to sew the sails costs, set down there, six reals per libra.⁴⁶⁹

Iron components, fittings, and nails remained the only key components remaining to be secured for shipbuilding in the Philippines. Many larger forged items like cannon, anchors, and chains were obtained from mainland Asia, which was a much more proximate source for such bulky items. While many smaller components like nails were likewise obtained from Asia rather than Europe, we must also not discount the possibility that *Indio* shipbuilders incorporated the ironless construction techniques they were accustomed to when charged with building a Manila galleon. While many Spanish sources comment on the techniques of ironless construction

⁴⁶⁸ de Pineda, "Philippine Ships and Shipbuilding," Blair and Robertson, 26 May, 1619, 18; "Petición de Sebastián de Pineda de puesto en la armada que va a Filipinas," AGI, Filipinas, 38, n.12 (accessed via PARES).

⁴⁶⁹ De Pineda, "Philippine Ships and Shipbuilding," Blair and Robertson, 26 May, 1619, 18; "Petición de Sebastián de Pineda de puesto en la armada que va a Filipinas," AGI, Filipinas, 38, n.12 (accessed via PARES).

observed in indigenous ship building—such as doweling or lashing planks rather than nailing them—I have yet to find any record, textual or archeological, of *Indio* shipbuilders applying such techniques to the construction of European-style galleons. In fact, the excavation of the *San Diego*, as mentioned above, has proven the extensive use of iron nails in galleons constructed in the Philippines.

De Pineda’s report, including a great many others, further indicates that Philippine forests were used extensively and in quantities commensurate to galleon construction in Europe. Once the abundance and quality of local natural resources had been determined, and once local skilled labor could be applied in significant force, shipbuilding took off in the Philippines. Construction at shipyards had become so greatly accelerated by the time of the Dutch Wars in the first half of the seventeenth century that by 1619 suitable timber could only be “obtained from a distance.”⁴⁷⁰ The typical narrative offered by observers prior to 1600 regarding timber in the Philippines is one of abundance. The fact that there is a noticeable shift some decades later and that reports begin to speak of timber scarcity is evidence that the Philippines had been made into a major shipbuilding center and was consuming timber at a fantastic rate. Hernando de los Rios Coronel reported to the King in 1621 that locating suitable timber for ship construction now required laborers to penetrate deeper and deeper into the interior of the islands.⁴⁷¹ In his environmental study of the Philippines, Greg Bankoff notes that while no timber species went extinct because of Spanish shipbuilding, many of the more sought-after species have been genetically “eroded,” that is their numbers are now so greatly reduced that their long-term genetic diversity is compromised to the point of “increasing the likelihood of chance extinctions.”⁴⁷² By the early seventeenth

⁴⁷⁰ Bankoff, 33.

⁴⁷¹ Hernando de los Rios Coronel, Blair and Robertson, 19: 203.

⁴⁷² Bankoff, 33.

century officials in New Spain recognized that the Manila Bay region provided everything necessary for ship construction. In 1620 the governor of the Philippines sent to New Spain a report attesting that Manila no longer required Mexico City to ship supplies of rope, sailcloth, or anything else for ship construction and that a great deal of expense could be avoided by allowing Manila to become fully self-sustaining.⁴⁷³

Conclusion

The exploitation of *Indio* labor combined with the abundant stocks of timber resources throughout the archipelago constituted an immeasurable savings for colonial finances in the Spanish Philippines. Shipbuilding in the early modern era was one of the most advanced proto-industries of the time, involving complex divisions of labor, diverse raw materials that were often collected and transported over great distances, and highly skilled master craftsmen, all converging on a shipyard situated amongst the necessary trade routes.⁴⁷⁴ In Europe by the late sixteenth century managing these resources for the purposes of shipbuilding had become costly enough to require many financial backers and the guiding hand of a powerful and organized state infrastructure.

Let us first recall that shipbuilding was the single most vital industry in forging and maintaining overseas colonies in the early modern period. On the one hand, oceangoing vessels were required to facilitate commercial exchange, which was the *raison d'être* of most all of Europe's overseas possessions, the Philippines included. On the other hand, sailing vessels were required on a much more basic level to maintain a link to the metropole and to ferry in human

⁴⁷³ Blair and Robertson, 19: 96.

⁴⁷⁴ Wallerstein with Hopkins, 221 – 233.

and material resources to maintain and develop the colonial infrastructure. Lastly, colonial holdings far from Europe were especially vulnerable to foreign attack, either from competing European powers or local actors. Defense required a strong naval presence. Let us also not forget that states were but one of an array of actors and participants in trans-oceanic commerce and exploration; private actors such as foreign investors, banking houses, collectives, and others came together, often ignoring political alliances and boundaries, to finance and orchestrate expeditions. Shipbuilding and seafaring over great distances was an expensive and complex affair and required contributions from many segments of society. All of these demands fueling shipbuilding were magnified several fold in the remote Philippines where Castile's agents controlled only one major port city and depended entirely upon overseas commerce with Southeast and East Asia for the commercial development of the Manila. What is more, the Philippines were over 9,000 miles from the next closest Spanish port in New Spain and Spaniards in Manila were under constant threat of invasion from either the Portuguese, Dutch, English, Chinese, Moros, or Japanese. For these reasons, shipbuilding became the number one industry in the early colonial Philippines but could rely on none of the traditional state, banking, and investing networks of Europe.⁴⁷⁵

Secondly, we must remember that it was typically the case that building European-style vessels in overseas colonies became increasingly more difficult and expensive the further from Europe one moved. Spaniards in the New World found that labor (and, more importantly, skilled labor) became more scarce and thus more expensive. Not all the needed materials were available

⁴⁷⁵ In terms of the volume of labor and materials required and its larger role in facilitating commerce and economic development, we can count shipbuilding as being one of three major industries in the early modern world economy alongside textile manufacture and mineral extraction. Wallerstein, *The Modern World-System II*: 16. Wallerstein cites the works of Ruggiero Romano as being in general agreement with this view.

and importing goods like rope, chain, and sail cloth multiplied costs even further. We need only look back to the experiences of Spain's wealthiest conquistadors in New Spain in the sixteenth century. Cortés, Balboa, and Alvarado, as was discussed in Chapter 3, each found that even the most modest of shipbuilding enterprises was enough to put them in debt by tens of thousands of pesos.⁴⁷⁶ Construction of even the smallest and most poorly constructed vessel along the Pacific coast of New Spain generated lengthy complaints from those who financed the project. All complaints were similar, citing high labor costs and the unavailability of materials. Legazpi's fleet of two modestly sized ships and two small *pataches* built in the 1560s was reported to have cost a total of "382,468 pesos, 7 tomines, 5 grains of common gold; and 27,400 pesos, 3 tomines, 1 grain of gold dust."⁴⁷⁷ It is interesting to note that the many requisitions issued from the Philippines prior to the conquest of Manila asking for fresh supplies almost always cited shipbuilding materials, "negro slaves," and skilled shipwrights to be imported.⁴⁷⁸ This goes to

⁴⁷⁶ Balboa had spent 50,000 ducats on his four small ships, which was equivalent to roughly 18.7 million *maravedis*. See *Borah, Early Colonial Trade and Navigation*, 3. See also, Angel de Altolaquirre y Duvale, *Vasco Núñez de Balboa* (Madrid, 1914). Cortes' claimed to have spent a total 60,000 gold pesos on the construction of Saavedra's three rather small and poorly constructed vessels, 10,000 of which went to labor alone, which had to be paid at a remarkable rate of 3 gold pesos a day. See Noone, 168; Hernán Cortés, 18 May, 1532, "An account made by His Excellency Hernando Cortes of the expenses incurred in the making of the armada in Nueva España for the discovery of the Spice Islands..." (Manila: National Trust for Historical and Cultural Preservation of the Philippines, 1990.) Alvarado claimed to have spent 130,000 pesos and accumulated 50,000 pesos of debt in the construction of what was essentially his own personal Pacific fleet. See, Pedro de Alvarado, "Letter to Charles V," 18 January, 1534, in Kelly, *Pedro de Alvarado*, 249.

⁴⁷⁷ One source claims that the grand total for the fleet was 600,000 pesos. "...costaron mas de seyscientos mil pesos de Atipusque hechas a la vela." This is cited from "Copia de una carta venida de Sevilla a Miguel Salvador de Valencia [1566]," reprinted in Blair and Robertson, II, 220.

⁴⁷⁸ See, for example, Legazpi's last request for supplies sent to New Spain just prior to the conquest of Manila. The first item requested is rigging, followed by pitch, shipmasters, carpenters, and caulkers. "Requisitions of Supplies for the Spanish Forces in the Philippines, c.1570," in Blair and Robertson, III, 132. Requests for slaves to be imported stemmed both from

show that prior to the founding of Manila, Spaniards in the Visayas faced the same scarcity of labor and materials as in New Spain and therefore the same high costs of shipbuilding. This is all to say that shipbuilding was a costly endeavor requiring vast inputs of labor, material resources, social organization, and financial backing. By the mid-sixteenth century it surely would have been evident that to recreate a European shipyard in Southeast Asia—or even New Spain—using European labor and European materials was a logistical and financial impossibility. If this had continued to be the case, and the construction of even small vessels continued to cost tens of thousands of pesos, the Philippines would have never become a Spanish colony.

Fortunately for Castile's Pacific ambitions and, more directly, the merchants and mariners of New Spain, Legazpi's relocation to Manila in 1571 secured two vital resources that at long last made shipbuilding in the Pacific an affordable and productive venture: labor and building materials. This chapter has shown that by forcibly conscripting masses of *Indio* laborers and withholding their wages (often indefinitely) ships were produced at a fraction of what it cost in New Spain or Europe at the time. In 1586 a 600-ton ship was built for "little over four thousand pesos."⁴⁷⁹ Compare this figure with a report of the same year that claimed two ships, the *San Martin* and the *Santa Ana*, were built in New Spain for "more than 140 thousand ducats," which is roughly equivalent to 70,000 pesos.⁴⁸⁰ If it were not for the supply of cheap yet highly skilled *Indio* laborers, supplying the distant Philippines with enough vessels to defend and run the trans-Pacific trade would have meant securing vessels from New Spain, which would have cost the crown dearly and would have more than likely made the venture financially

the scarcity of labor in the Visayas as well as the general ban on enslaving the *Indio* subjects of the Philippines.

⁴⁷⁹ "An account of what is known about the Islas Filipinas," 1586, in Licuanan and Llavadro, vol. 4, 410.

⁴⁸⁰ "An account of what is known about the Islas Filipinas," 1586, in Licuanan and Llavadro, vol. 4, 410.

unfeasible. The exploitation of *Indio* labor also greatly aided in the speed and volume of production. Not long after 1571, numerous other shipyards sprang up elsewhere on Luzon and in the Viasayas. Where decades often separated large shipbuilding projects in the New World, by the early years of the seventeenth century the Philippines were producing large trans-Pacific galleons nearly every year. During the brief tenure of governor Juan de Silva (1609-1616), Captain Sebastián de Pineda recorded the completion of the galleons *Espiritu Santo* and *San Miguel* at Cavite, the *San Felipe* and the *Santiago* on the island of Albay, the *San Marcos* on Marinduque, the *San Carlos* and the *San Jose* in Pangasinan, the *Salvador* in Masbate, and the *San Juan Bautista* in Mindoro.⁴⁸¹ Such output, obviously, required a tremendous amount of labor marshalled under a highly regulated system.

Considering the success of Philippine shipbuilding, both in terms of productivity and money saved, as well as the funds saved by appropriating goods via the *vandala*, it stands to reason that historians of the Spanish empire should reassess the notion that the Philippines were a net drain on the finances of the empire.⁴⁸² All too often the existence of the annual *situado* payments have been taken as hard evidence of a trade deficit, fiscal mismanagement, and the

⁴⁸¹ de Pineda, "Philippine Ships and Shipbuilding," 26 May, 1619, Blair and Robertson, 18: 173-174.

⁴⁸² The assumption that the Philippines were a fiscal liability has been repeated in almost every work on the subject of the Spanish Philippines. Contemporaries who lived through the conquest and the early colonial period noted the lack of profit generated in the Philippines on account of the dearth of valuable spices and mines. Antonio de Morga, writing in the early seventeenth century, reported that, "our lord the King derives no material profit from the Philippines, but rather incurs no mean charges, which are set off against his revenues from New Spain." Quoted from Antonio de Morga, *Sucesos de las Islas Filipinas*, translated by J. S. Cummins (Cambridge: Cambridge University Press, 1971), 313. More recently the notion that the Philippines would have been insolvent without an annual subsidy from New Spain has been propagated by Leslie E. Bauzon in *Deficit Government*.

commercial underdevelopment of Manila.⁴⁸³ Historians, almost as a rule, have focused on the raw fiscal account data of colonial Manila, assuming such records speak for all expenses and profits underpinning the colony. What is rarely taken into account are the tremendous savings the colonial government and the ruling elite in the Philippines enjoyed through the exploitation of *Indio* labor and agricultural productivity, as well as the vast supplies of free timber on hand in Luzon—items which were rarely incorporated into the balance sheets. One of the few historians to realize these facts, Luis Alonso, wrote that “in reality the tribute and forced purchases from the indigenous population generated substantial income, but because these were not registered in the Manila treasury, it helped obtain succulent *situados* from the Mexican treasury.”⁴⁸⁴ This raises the question, how necessary was the *situado*?

I will here make no effort to overhaul the historical record, but will go so far as to say the contributions of the *Indios* of the Philippines has been undervalued by historians and the notion of a fiscal dependency between the Philippines and New Spain has been too quickly adopted as fact. Leslie E. Bauzon and Catherine Bjork have both attempted reassessments of the *situado* and have done much to revise the standard narrative. Bauzon, for example, noted that the *situado* payment itself was largely made up of the “customs duties levied in Acapulco from shipments of Chinese goods by the Manila traders.”⁴⁸⁵ Here again it would seem the Philippines were generating, not draining, money and resources for the larger empire. If Bauzon is correct, the trade goods carried by the galleons subsidized the galleon trade, not necessarily the viceroyalty of New Spain.

⁴⁸³ For works that attempt to reassess the nature of the *situado* and the profitability of the Philippines, see Leslie España Bauzon, *Deficit Government: Mexico and the Philippine Situado (1606 – 1801)*, East Asian Cultural Studies Series 21 (Tokyo: Centre for East Asian Colonial Studies, 1981); Alonso, 63 – 95; Bjork.

⁴⁸⁴ Alonso, 65.

⁴⁸⁵ See Bjork, 42; Bauzon.

CHAPTER 5

Onto the Sea

“There is not an Indian in these islands [The Philippines] who has not a remarkable inclination for the sea; nor is there at present in all the world a people more agile in maneuvers on shipboard...”

Francisco Leandro de Viana, “Memorial,” February 10, 1765

“In order to destroy the said island of Mindanao and its pirates, without the necessity of spending for it anything from your Majesty’s royal treasury, it needs only your Majesty’s orders to make slaves of the said Mindanao natives of that island—since they are infidels...”

Sebastian de Pineda, “Philippine Ships and Shipbuilding,” May 26, 1619

Spain’s dependency upon the labor, production, and the skills of their *Indio* subjects in the Philippines was not confined to the land. Most histories of the Spanish Philippines only make the briefest of mentions of the numerous and vital roles that the islands’ inhabitants played as seaborne participants in both trans-Pacific commerce with New Spain as well as in the naval defense of Manila. And it was not just the *Indios* of the Philippines that found themselves drawn to the sea in the service of the Spanish—there were numerous Chinese and Chinese mestizos, Malays, Japanese, *Moro* slaves, and many other Southeast Asians participating in Spain’s

maritime enterprises in the Asia-Pacific region. This chapter argues that the creation of the Manila-Acapulco galleon trade was done so with the close involvement of Southeast Asian seafarers (mainly Philippine *Indios*), who were in most cases forced onto the sea and utilized both for their labor and expertise.

The extent to which Southeast Asian indigenous peoples were bound up in Spain's trans-oceanic voyaging into and out of the Philippines is perhaps no better illustrated than in the persona of Enrique de Malacca, a seafarer often overlooked in the heroic histories of maritime exploration. Enrique enters the historical record as a slave under the possession of Ferdinand Magellan. Before defecting to the Spanish, Magellan served the Portuguese and was amongst the combined Asian-Lusitanian forces that sacked the key port city of Malacca in 1511. It would appear that sometime soon thereafter Magellan purchased or otherwise came into possession of Enrique, who was recorded as being a native of Malacca or perhaps Sumatra.⁴⁸⁶ Enrique sailed back to Europe with Magellan and several years later appears in Seville on the manifest of Magellan's famous voyage of 1519 where he was to serve as an interpreter and guide once the Spanish fleet had reached Southeast Asian waters. At this stage Enrique was listed as being

⁴⁸⁶ Navarrete, 4: 85. Navarrete utilizes the history of Maximilianus Transylvanus, writing in his history of Magellan's voyage that, "Cuando Magallanes estuvo en la India al servicio del rey de Portugal, compró en Malaca un escalvo, natural de las islas Molucas, segun algunos escritores, y de Sumatara segun otros; al cual puso por nombre Enrique, y en Espana le enseñó la lengua castellana, que aprendió con mucha perfección y hablaba muy ladino." Magellan's will, drafted in Seville prior to his departure in 1519 is reprinted in Guillemard, 317-326. The relevant section of the will states, "And by this my present will and testament, I declare and ordain as free and quit of every obligation of captivity, subjection, and slavery, my captured slave Enrique, mulatto, native of the city of Malacca, of the age of twenty-six years more or less, that from the day of my death thenceforward for ever the said Enrique may be free and manumitted, and quit, exempt, and relieved of every obligation of slavery and subjection, that he may act as he desires and thinks fit; and I desire that of my estate there may be given to the said Enrique the sum of ten thousand maravedis in money for his support; and this manumission I grant because he is a Christian, and that he may pray to God for my soul." Guillemard, 321 – 322.

twenty-six years old. Antonio Pigafetta, the chronicler of the famous circumnavigation, recorded a number of instances where Enrique communicated with the native inhabitants of the Visayas on behalf of Magellan, facilitating both trade and the forging of diplomatic relations in the Philippines.⁴⁸⁷ Here then we have evidence of Enrique, albeit a Southeast Asian of ambiguous ethnicity, aiding Spain's efforts in the Philippines from the very beginning of their ventures into the Far East. What is perhaps most astonishing is that Enrique, for all intents and purposes, had completed his own circumnavigation of the globe as soon as Magellan's fleet arrived in Southeast Asia in 1521, thus beating Sebastian del Cano and the rest of Magellan's surviving crew by roughly a year.

Unfortunately for the expedition, it would seem that Enrique's most influential act was to come in a masterful work of treachery. Following Magellan's demise at Mactan in April of 1521, Enrique had found good cause to betray his fellow crewmen. Magellan's last will and testament stated that upon his death that Enrique was to be granted his freedom and a payment of 10,000 *maravedis* from Magellan's estate.⁴⁸⁸ Both his freedom and his inheritance were denied him by the new leaders of the expedition, Duarte Barbosa and João Serrão, both of whom saw fit to retain Enrique as a slave and translator for the remainder of the voyage.⁴⁸⁹ When asked to go ashore to Cebu and meet with the *datu* Humabon to make clear the Spaniards' intention to continue their alliance, it would appear that Enrique seized the opportunity to advise the local

⁴⁸⁷ Pigafetta writes that Enrique appeared to be able to communicate in a number of languages with those they encountered in the Visayas and to properly advise Magellan in a number of local customs and rituals. Noone, 69; Pigafetta, *Magellan's Voyage*, I: 109. The linguistic faculties of Enrique and his general utility to the expedition can be called into question, however. A fellow crewman of the voyage, Ginés de Mafra complained that Enrique "was of little use as an interpreter, because of his fondness for drink and in the lavish reception ashore, he got completely befuddled." Noone, 66.

⁴⁸⁸ Guillemard, 321 – 322.

⁴⁸⁹ Zweig, 268.

leader not to trust the Spanish. Although what was said between Enrique and Humabon will never be known, it would appear that together they devised the May 1st ambush, wherein twenty-four members of Magellan's surviving crew were killed after being invited ashore under the pretenses of a feast.⁴⁹⁰ Enrique at this point disappears from the historical record, receding back into Southeast Asia. In whatever way one wishes to measure Enrique's contribution to Spanish exploration in the Philippines, one cannot deny that he was an integral participant in Spain's inaugural voyage to the distant archipelago and the first recorded human to complete a circumnavigation of the globe. Enrique was not an exception, but rather one of the first of many tens of thousands of Southeast Asians who were swept up and carried across the world's oceans as part of Spanish, Portuguese, Dutch, and English voyages in the early modern period.

Looking to the completion of the *Victoria's* 1521 – 1522 voyage from the Spice Islands back to Seville, we see further evidence of Southeast Asian participation. With not enough crewmen to man the *Victoria* and with no skilled navigator left amongst the forty or so surviving Europeans, thirteen local seafarers of various ethnic backgrounds and two Tidoran navigators were taken aboard for the long voyage home. The Southeast Asian pilots were responsible for getting the slow and leaky *Victoria* to the Indian Ocean, sailing south between Buru and Ceram and onwards to the northern coast of Timor.⁴⁹¹ Sailing such a route would have been old hat for these Tidorans but a wholly foreign experience for the European crewmen. Once at Timor the two pilots likely provided the European and Asian crew with final instructions before disembarking and returning home aboard local trading vessels.⁴⁹² Pigafetta's account of the return voyage offers only glimpses of the Asian crewmen who continued on aboard the *Victoria*

⁴⁹⁰ Noone, 166.

⁴⁹¹ Noone, 99.

⁴⁹² The *Victoria* was under the guidance of native pilots from 21 December, 1521 to 11 February, 1522.

and sailed across the Indian Ocean and into the Atlantic. To take one particularly morbid and haunting example of one of these glimpses, Pigafetta noted in his diary that of the many corpses that were thrown overboard each day as the *Victoria* sailed the final leg of its voyage north through the Atlantic, some portion were Asian. Of the twenty-one men that died between the African cape and Seville, some were Asian and some were Christian: “The Christians remained with the face turned to the sky,” wrote Pigafetta of the discarded bodies, “and the Indians with the face turned to the sea.”⁴⁹³ By the time the *Victoria* limped into port at Seville on September of 1522 there were a mere eighteen men left alive, and an unrecorded number of whom were Asian, their names never recorded. Without the native crewmen, Magellan’s expedition would likely have never found the Moluccas, would have had a most difficult time navigating into the Indian Ocean, and would likely have not had enough men to operate the vessel once in the Atlantic.

Indigenous participation and aid was vital to the success of Spain’s maritime operations in the Pacific and Southeast Asia, and, as this chapter will show, the presence of Philippine and other Southeast Asian seafarers permeated many aspects of Spanish voyaging in Asia. This chapter traces the experiences of *Indios* at sea, firstly in the capacity of local seafarers made to work as rowers, navigators, and amphibious soldiers in Spain’s defense of their new Philippine

⁴⁹³ Antonio Pigafetta, *Primer viaje alrededor del mundo*, ed. Leoncio Cabrero (Madrid: 1985); Translated edition by Lord Stanley Alderley (London: 1874), 161. The intended meaning of this quote is difficult to determine but likely harbors religious significance, particularly with Spanish (Christian) corpses turned to the heavens and the Asian (heathen) bodies turned to the sea. The full passage reads: “At length, by the aid of God, on the 6th of May, we passed that terrible cape, but we were obliged to approach it within only five leagues distance, or else we should never have passed it. We then sailed towards the north-west for two whole months without ever taking rest; and in this short time we lost twenty-one men between Christians and Indians. We made then a curious observation on throwing them into the sea, that was that the Christians remained with the face turned to the sky, and the Indians with the face turned to the sea. If God had not granted us favourable weather, we should all have perished of hunger.”

colony. Early colonial Manila faced a great number of enemies, including Chinese pirates, anti-Christian Japanese forces, Dutch blockades, and Portuguese commercial competitors, all of whom attacked, or threatened to attack, from the sea. This study will particularly focus on the two greatest seaborne threats to the Spanish Philippines in the early seventeenth century and the extent to which Spain's *Indio* subjects were impacted. The most constant seaborne threat was that posed by the *Moros* of Mindanao and the Sulu archipelago, who engaged in near-constant coastal raiding throughout the Christian portions of the Philippines. The arrival of the Dutch in Southeast Asia marked the beginning of a second hostile advance on the Spanish Philippines, which was part of a larger (global) maritime war between the unified Iberian Crowns and the waxing VOC (*Vereenigde Oost-indische Compagnie*). The combined stresses of enduring numerous seaborne Dutch attacks and blockades as well as Muslim slave raids during the first half of the seventeenth century placed a remarkable strain on *Indios*; their labor and service obligations were increased tremendously during wartime, both on land and at sea. Aside from the impact of local naval warfare in Asian waters, *Indios* took on a second distinct role at sea for the Spanish by serving aboard the Manila galleons for their yearly voyages across the Pacific. While Spaniards may have commanded the galleons of the Acapulco-Manila trade they were operated in every case by crews that were largely of Philippine origin. It was not unusual for a Manila galleon arriving in Acapulco to have a crew that was as much as 90% Asian and with only a small Spanish contingent serving as officers.⁴⁹⁴ A consequence of this multi-cultural voyaging was the emergence of a number of Philippine diaspora communities along the Pacific coast of

⁴⁹⁴ The exact crew complements for most of the Manila galleon voyages have been lost though scant and indirect evidence survives in the archives of Seville. See Wayne V. Burt, "The Search for the Manila Galleon Log Books," *Bulletin of the American Meteorological Society* 71 (1990): 1630-36. See also, Slack, "The *Chinos* in New Spain; Guevarra, "Filipinos in Nueva España."

New Spain, which formed as early as the 1570s following the completion of the first galleon voyages.⁴⁹⁵

The extensive involvement of Philippine and Southeast Asian seafarers in Spanish maritime operations is a direct product of Spain's limited manpower in Asia. It should be made clear that a lack of manpower was a continual problem for all European powers operating in Asian waters in the early modern era. Many Europeans were simply unwilling to risk their lives in such long and grueling voyages and those that did sail to the other side of the globe often died from disease, starvation, foul weather, shipwreck, amongst a range of other fatal dangers.⁴⁹⁶ It should come as no surprise then that those who did eventually make it to the distant Philippines, or to Portuguese Malacca, or to Dutch Batavia, were few in number and more often than not social outcasts, fortune seekers, "untrained juveniles, vagabonds, layabouts, and criminals."⁴⁹⁷ However, following the initial wave of exploratory voyaging, the development of a lively Atlantic economy necessitated the creation of the Casa de la Contratación in 1503. Together with the Spanish government the House of Trade placed strict regulations on who could sail to the New World and participate in trade. The same could not be said for voyagers from the New World to the Philippines however. Such a voyage was the most dangerous that could be made in the early modern era. By the late 1500s the number of Spaniards in Manila could be measured in the hundreds, and even as late as 1604 there were no more than 1,200 Spaniards in the entire

⁴⁹⁵ Floro L. Mercene, *Manila Men in the New World: Filipino Migration to Mexico and the Americas from the Sixteenth Century* (Manila: University of the Philippines Press, 2007).

⁴⁹⁶ Scurvy, malnutrition, starvation, and simply shipboard sickness more generally, were common problems aboard almost every long-distance voyage in the early modern era. The Portuguese, Dutch, and English suffered similarly to the Spanish in South and Southeast Asia. Tickner and Medvei; Harold J. Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven, CT: Yale University Press, 2008).

⁴⁹⁷ C. R. Boxer, "War and Trade in the Indian Ocean and South China Sea, 1600 – 1650," *Mariner's Mirror* 71 (1985): 417 – 435.

archipelago—many of them having come from the jails and slums of New Spain.⁴⁹⁸ Generally, all European maritime forces were wanting for manpower in distant Asia.

The work of G. V. Scammell, amongst a few others, has shown us that while the Portuguese had made rapid advances through the Indian Ocean basin in the first years of the sixteenth century, surging from the African Cape to Goa, Malacca, and to the Spice Islands by the early years of the 1500s, they were only able to find and secure these key ports through the aid of thousands of indigenous seafarers, soldiers, pilots, and informants.⁴⁹⁹ While all European powers operating overseas in the early modern period faced the challenge of depending upon local manpower, there was a key difference in Spain's strategic position in Asia versus that of the Portuguese and Dutch. Spain's European competitors were able to spread their dependency on Asian land-based and sea-based manpower throughout dozens of ports and harbors across the Indian Ocean and Southeast and East Asia.⁵⁰⁰ In stark contrast, Spain's imperial project in Asia was wholly dependent upon the population of a single archipelago and therefore the labor and service demands were far more concentrated and had far more penetrating social repercussions for the indigenous population. The union of the Spanish and Portuguese crowns from 1580 to 1640 facilitated the sporadic cooperation between the two kingdoms in Asia, but generally

⁴⁹⁸ Corpuz, *Roots of the Philippine Nation*, 57; Wills, 554. Wills states that in 1586 only 2,000 Spaniards were living in the Philippines, compared to the roughly 10,000 Chinese merchants at Manila alone. The recorded tribute-paying Indio population of the Philippines in the early seventeenth century exceeded 500,000.

⁴⁹⁹ Scammell, "Indigenous Assistance in the Establishment of Portuguese Power in Asia in the Sixteenth Century," 141 – 150. Scammell cites a number of figures indicating Portugal's near-total reliance upon indigenous peoples in Asia. When attacking Malacca, for example, Albuquerque left a contingent of 500 Europeans and 2,500 Indian troops to defend Goa. When attacking Aden, the Portuguese again could only muster a few hundred of their own countrymen but relied upon some 5,000 Indian seafarers and troops to fill their ranks. Scammell, "Indigenous Assistance," 147.

⁵⁰⁰ Boxer, "War and Trade," 431. It is interesting to note that the VOC initiated alliances with Spain's Muslim enemies in Mindanao, Jolo, and Sulu, ignoring any religious antagonisms in favor of putting further pressure on the Spanish.

relations between the Spanish Philippines and the Portuguese holdings in Southeast Asia and throughout the Indian Ocean basin remained cool.

Spain had only one substantial colonial holding in all of Asia from which to build a foothold, and as such, the Philippines and its peoples were made to shoulder the entirety of Spain's labor and resource needs in the Asia-Pacific region. Where chapter four explored the repercussions of this concentrated dependency as it played out on land, we shall now look to the sea.⁵⁰¹

Indios at Sea in Asia

The reliance upon *Indios* to fill the ranks of Spanish armies and navies was a practice adopted from the very start of Legazpi's campaign in Luzon. Indeed, the island of Luzon was pacified only through significant aid of allied *datus*. The conquest of the upper reaches of the Pampanga River, for example, was completed with no more than eighty Spaniards with a complement of 1,400 native soldiers.⁵⁰² Similarly, the conquest of the Zambals involved a mere 120 Spaniards and some 3,000 allied Pampangos.⁵⁰³ Even Martín de Goyti's expedition of 1570 that first sighted Manila Bay was comprised mostly of indigenous mariners and vessels. De Goyti had

⁵⁰¹ For more on the character of Spain's overseas empire versus that of their Iberian rivals more generally, see Subrahmanyam, "Holding the World in Balance"; Patricia Seed, *Ceremonies of Possession in Europe's Conquest of the New World, 1492 – 1640* (New York: Cambridge University Press, 1995); C. R. Boxer, *The Portuguese Seaborne Empire, 1415 – 1825* (New York: Knopf, 1969); J. H. Parry, *The Spanish Seaborne Empire* (New York: Knopf, 1966); Henry H. Keith, "New World Interlopers: The Portuguese in the Spanish West Indies, from the Discovery to 1640," *The Americas* 25 (1969): 360 – 371; C. R. Boxer, *From Lisbon to Goa, 1500 – 1750: Studies in Portuguese Maritime Enterprise* (London: Ashgate, 1984); Daviken Studnicki-Gizbert, *A Nation upon the Ocean Sea: Portugal's Atlantic Diaspora and the Crisis of the Spanish Empire, 1492 – 1640* (New York: Oxford University Press, 2007).

⁵⁰² Corpuz, *Roots of the Philippine Nation*, 62.

⁵⁰³ Corpuz, *Roots of the Philippine Nation*, 74.

with him just two Spanish vessels from the fledgling outpost in the Visayas, the *San Miguel* and the *Tortuga*, but an additional fifteen native vessels.⁵⁰⁴ The second expedition to Manila Bay in 1571, wherein Legazpi sought to conquer its native inhabitants, again comprised just two Spanish vessels but an additional twenty-three *proas* from the island of Panay.⁵⁰⁵ Henceforth, natives of the Philippines and their vessels were used extensively by the Spanish to conduct voyages of diplomacy, war, discovery, and commerce throughout Southeast Asia. The threat of war was constant and the demands upon the indigenous sporadic and unpredictable, such as when a fleet of local vessels was put at the ready in 1592—at great effort from *Indios*—in anticipation of a Japanese invasion that never materialized.⁵⁰⁶

While this study focuses on the contributions of natives of the Philippines, we should not forget that there is ample evidence that Spaniards utilized Chinese and Japanese as rowers and seafarers as well. In 1609 Father Gregorio López reported that when a galley was sent from Oton (in Iloilo) to the Spice Islands to help repel a Dutch advance that the mission was ruined and many Spaniards killed when their Chinese and Japanese rowers “conspired to mutiny.” López goes on to note that despite the hostility between the Chinese and Japanese, “and although those nations are like cats and dogs, they were very much in concord on this occasion.”⁵⁰⁷ Rowing was an onerous duty in the service of the Spanish Philippines and rebellions were not infrequent aboard local oared vessels. The fact that Father López refers to these rowers as “convicts” is indicative of the fact that serving the Spanish at sea was a most undesirable prospect. It is also

⁵⁰⁴ Scott, *Boat Building and Seamanship*, 10.

⁵⁰⁵ Cushner, *Spain in the Philippines*, 66. *Proas* refer to small single-mast outrigger vessels (often with multiple parallel hulls) found throughout Southeast Asia. The term *proa* in many regions of Southeast Asia was a general term for sailing vessel, much like *nao/nau* was in Iberia.

⁵⁰⁶ Scott, *Boatbuilding and Seamanship*, 10.

⁵⁰⁷ Father Gregorio Lopez, “Relation of 1609 – 1610,” Blair and Robertson, 17: 100 – 143.

likely the case that where *Indios* often served as seamen as part of their obligatory labor obligation to the Crown, Chinese, Japanese, *Moros* and others were only subjected to seaborne labor in the capacity of serving out a punishment or as an outright slave or war captive. In the early years of the colony efforts were made to pay non-*Indios* (namely Chinese) for labor services but this practice generally fell out of use as paymasters were reluctant to honor wages and many non-*Indios* refused the harshest labor obligations, such as rowing and felling timber. To be sure, the earliest Spanish reports from the Philippines would seem to indicate that at least for a time Chinese rowers were heavily favored over *Indios*. The Governor of the Philippines, Gómez Pérez Dasmariñas (in office from 1590 – 1593), for example, turned to forcibly enlisting the Chinese residents of Manila as rowers when *Indios* proved incapable. Dasmariñas, seeking to outfit an expedition to the Spice Islands offered Chinese rowers “two Pieces of Eight a Month” and the guarantee that they would not be chained. However, the governor threatened that if he did not receive 250 volunteers he would force a draft of every tenth Chinese male in Manila.⁵⁰⁸ The unwillingness of the Chinese to serve as rowers was made clear in 1593 when Governor Dasmariñas himself was killed by his own crew of Chinese rowers while en route to the Spice Islands. For whatever reason, Spaniards in the Philippines initially preferred to use Chinese over *Indio* rowers. A letter of 1566 from Santiago de Vera (who would later become governor himself) reported to Philip II that the *Indios* of the Philippines were “of little use” for sailing “nor do they have sufficient strength for rowing.”⁵⁰⁹ De Vera therefore preferred to rely upon the labor of “three-hundred Chinese” for one particular voyage.

⁵⁰⁸ Bartolomé Leonardo de Argensola, *The Discovery and Conquest of the Molucco and Philippine Islands: Containing their History, Ancient and Modern, Natural and Political: their Description, Product, Religion, Government, Laws, Languages, Customs, Manners, Habits, Shape, and Inclinations of the Natives*, English edition (London: 1706), 133 - 134.

⁵⁰⁹ Santiago de Vera, “Letter to Felipe II,” 26 June, 1588, Blair and Robertson, 7: 51 – 52.

Such an account as de Vera's, while reflecting an early preference for Chinese maritime labor, is not an accurate reflection of *Indio* ability at sea nor their eventual value in the eyes of the Spanish. More often than not, rowers and seafarers in the employ of the Spanish are indicated as being *Indios* and were regarded by their Spanish masters as being highly skilled when it came to seafaring.⁵¹⁰ *Indio* seafarers became a vital commodity for the Spanish administration and a resource that was used in concert with native species of timber and local communities of shipbuilders to effect maritime control of the Philippine archipelago. But reports such as de Vera's remind us that serving the Spanish at sea was at times a multi-ethnic affair—not only were there *Indios* and Chinese aboard Spain's vessels in Asia, but Japanese, Malays, and *Moros* as well.

Indio seamen filled in the ranks aboard Spanish vessels operating in a wide range of capacities, including missions of conquest, diplomacy, trade, as well as exploration. As early as 1578, Governor Francisco de Sande reported that he had attempted a peaceful voyage of diplomacy to the “king of Borney and Vindanao” [Borneo and Mindanao], and with him were “forty sail, counting ships of this country [the Philippines].”⁵¹¹ Rowing and sailing for great distances was a significant hardship for Spain's subjects to endure, no matter how accustomed they were to life on the sea. The duties required of *Indios* serving at sea either in times of peace or war ranged a great deal, and the severity of the labor demands aboard ship often depended entirely upon the length of the voyage. Domingo de Salazar, after becoming the first Bishop of Manila, filed a report to the Council of the Indies in 1583 that addressed the general state of the Philippines. His report contains a lengthy catalogue of abuses endured by the *Indios* of the

⁵¹⁰ Pedro de Acuna, “Letter to Felipe III,” June, 1605, Blair and Robertson, 12: 127.

⁵¹¹ Francisco de Sande, “Letter to Filipe II,” 29 July, 1578, Blair and Robertson, 4: 125 – 126. Interestingly, de Sande identifies a number of his rowers having been *Moros* from Luzon.

Philippines. His discussion focuses a great deal on wood cutting and shipyard labor specifically, as Chapter 4 noted. However, Salazar also included a lengthy discussion of the hardships of

Indios serving at sea:

When a long expedition is to be made, the wrongs they suffer are many. One is to dispatch for the Indians who are to row in a galley or frigate a sailor who has neither piety nor Christian feeling. Moreover, it is notorious that, without inquiring whether an Indian is married or single, or whether his wife is sick or his children without clothing, he takes them all away... The Indians are put into irons on the galleys, and flogged as if they were galley-slaves or prisoners. Moreover, the pay given them is very small; for they give each man only four reals a month—and this is so irregularly paid that most of them never see it. The [datus of the] villages from which they take the rowers divide the pay amongst themselves, or give it to those whom they impress as oarsmen.⁵¹²

One should be immediately struck by the similarities between laboring at sea aboard ship and laboring on land for ship construction. Both were opportunities for the Spanish to extract cheap (often unpaid) labor, both required that *Indios* to be taken for unknown lengths of time far from their homes, and both facilitated the corruption of the *principalía* class. All of this abuse necessarily placed tremendous social stress on the communities from which the laborers were taken. Once again, as with woodcutting, it would seem that service aboard Spanish vessels was tantamount to slavery. Many Spaniards critical of the abuse of *Indio* seamen targeted specific governors for their abusive and exploitive policies, particularly in times of war. In the 1590s, perceiving an imminent Japanese invasion, Gómez Pérez Dasmariñas rushed the construction of four galleys to patrol the waters of Luzon, “and for the manning of them,” notes one critical Spanish writer, “[he] took a Method which was look’d upon as severe. He Order’d, That as many Indians who were Slaves to other Indians of Quality, as would serve to Man the Galleys, should

⁵¹² Fray Domingo de Salazar, “Affairs in the Philippine Islands,” 1583, Blair and Robertson 5: 217 – 218.

be brought up, and Paid for by the Spaniards...”⁵¹³ The author of this polemical history of the early colonial Philippines, Bartolomé Leonardo de Argensola, claims in no uncertain terms that the governor of the Philippines had carried out a forced purchase of laborers through the *datus*. Many religious orders objected that such an action was in no way different from the purchasing slaves outright and that *datus* were taking up the role of slave dealers.⁵¹⁴ The colonial government often countered such claims, stating that sudden and extreme measures were required in times of war. Argensola’s report goes on to conclude that, “In short, all the slaves demanded by the Governor Gomez Perez, where raised with much Trouble and Oppression, and in the same Manner they were put into the Galleys, where...many of them dy’d, as not being us’d to that sort of Life.”⁵¹⁵

We should also not forget that *Indios* were taken out to sea not simply to fill the ranks, but, as in the case of Sebastian de Elcano’s voyage discussed above, often to impart valuable navigational advice and guidance, particularly when amongst the treacherous channels, reefs, and shoals found throughout the Philippines. As discussed above, the Manila galleons entered and exited the Philippine archipelago through the San Bernardino Strait, a narrow channel of fast moving currents and shallow waters that was responsible for most of the Manila galleon shipwrecks.⁵¹⁶ Despite its dangers the San Bernardino Strait was the ideal route into and out of the Philippines. Spain’s galleons, upon entering this treacherous passage, were piloted by one or more *Indios* who had a lifetime of applied experience negotiating the winds and currents in and around the Philippine archipelago. Guiding a slow, overloaded, and unresponsive Manila

⁵¹³ Argensola, VI: 132.

⁵¹⁴ Argensola, VI: 132.

⁵¹⁵ Argensola, VI: 133.

⁵¹⁶ This passage was alternately referred to as the Embocadero or the Paso de Acapulco. Schurz, *The Manila Galleon*, 221; Scott, *Boatbuilding and Seamanship*, 19.

Galleon into and out of the Philippines took a great deal more than a single *Indio* pilot, however. Assisting those aboard the galleon were dozens of local vessels acting as tugs and many more *Indios* at sea and on shore acting as guides and spotters.⁵¹⁷ “Among these islands,” wrote Governor Francisco de Sande in 1576, “there are certain currents which flow more rapidly than those of any river.”⁵¹⁸ This is a likely exaggeration but an indication that Spaniards recognized the challenges posed by sailing amongst the Philippine Islands. As such, negotiating a route through the Philippines was a time consuming affair. It was not unusual for a galleon departing Manila in June to not reach the open Pacific until August—the intervening months being spent negotiating the complex winds and currents of the archipelago.⁵¹⁹ And it was not just the Spanish that depended upon *Indio* pilots in the Philippines—any European power wishing to blockade or attack the Spanish Philippines likewise had to call upon indigenous seafarers to guide their way. In October of 1600, for example, the Dutch commander Oliver van Noort managed to enter the Philippines through the San Bernardino Strait only after disguising himself as a Frenchman and enlisting the aid of local pilots (who were at least superficially Spanish subjects.) Only after his vessel was guided to Manila Bay by local pilots was van Noort free to commence his attack.⁵²⁰

It was from the sea that Spain’s Philippine colony and its *Indio* subjects were most in danger of attack, whether it be from *Moro* slave raiders, Chinese pirates, Portuguese competitors, or the rapidly strengthening Dutch forces. As Chapter 4 has already shown, in times of war the demands upon *Indio* laborers were increased tremendously, particularly for the purposes of

⁵¹⁷ Scott, *Boat Building and Seamanship*, 19.

⁵¹⁸ Francisco de Sande, “Relation of the Philippine Islands,” 7 June, 1576, Blair and Robertson, 4: 70.

⁵¹⁹ William L. Schurz offers a good discussion of the many failed attempts to change the sailing route into and out of the Philippines. The obvious alternative was to sail due north along the western coast of Luzon. While such a route appeared safer, the merchant community of Manila was reluctant to risk their cargo on such a gamble. Schurz, *The Manila Galleon*, 224 – 226.

⁵²⁰ Desroches, et. al., 49.

increasing ship production. But, in addition to those land-based labor obligations tied to the Manila Galleons and colonial defense, there were equally important seaborne obligations forced upon the *Indios* of the Spanish Philippines. Many thousands of natives were drawn into service aboard locally-built warships defending the Philippine archipelago and the port of Manila from Dutch, English, Portuguese, and Chinese enemies. The *Indios* made possible not only the functioning of the colony, but also its defense by serving aboard local vessels.

The Demands of Seaborne Warfare

From roughly 1600 to 1650 the Spanish Philippines were subjected to two distinct but overlapping maritime confrontations, one with the *Moros* of the southern Philippines and Sulu, and the other globally against a rising Dutch empire.⁵²¹ As we will see below, the *Indios* of the Philippines found themselves drawn into both wars. The seaborne battles between the *Moros* of Mindanao and the Spanish controlled territories of the Philippines constituted the most constant seaborne threat to the Spanish colony and its *Indio* subjects up to roughly 1650. The Spanish-*Moro* conflicts can be seen on one hand as being part of a political-religious conflict between Christian and Muslim polities, not unlike the concurrent wars in the Mediterranean.⁵²² On the other hand, the activities of Mindanao-based “pirates” can (more accurately) be viewed as a natural extension of a larger Southeast Asian economy that was structured in part around slave

⁵²¹ For a brief assessment of the Hispano-Dutch War as the first global war, see Jan Glete, “The First Global War at Sea, 1600 – 1650,” in *Warfare at Sea*, 165 – 185.

⁵²² The main proponent of this view has been Cesar A. Majul. See his monograph, Cesar A. Majul, *Muslims in the Philippines: Past, Present, and Future Prospects* (Manila: Convislam, 1971). Other works include, Majul, *Muslims in the Philippines*; Majul, “The Role of Islam in the History of the Filipino People,” *Asian Studies* 4 (1966): 303 – 315; Majul, “Islamic Influence in the Southern Philippines,” *Journal of Southeast Asian History* 7 (1976): 61 – 73.

ownership and raiding excursions into settled coastal regions.⁵²³ The Hispano-Dutch war was a different beast altogether—it was global in scope and pitted the combined Portuguese and Spanish overseas empires against the rapidly expanding power of the Dutch. Where the *Moros* of Mindanao sought little else than to disrupt Spanish colonial commerce and social order (which they did quite well), the Dutch VOC sought to strangle the Iberian commercial empire in Asia and to displace it with its own network of trade. Where the *Moros* of Mindanao raided Spanish settlements with small and swift *caracor*s, the Dutch were capable of blockading Manila with large European vessels akin to Spain's own galleons. These wars were then quite distinct—although the VOC did ally with Spain's *Moro* enemies on a number of occasions—and were fought using wholly different technologies and tactics. Regardless, these overlapping wars had the same impact on the Spanish Philippines—the social order of the Philippines was greatly stressed by heightened wartime rates of labor and taxation and increased numbers of *Indios* were drawn onto the sea.

Whether one chooses to view the Spanish-*Moro* conflicts as a product of a religious-cultural conflict or as simply a product of a Southeast Asian slaving/raiding economy, the impact of the conflict is far less ambiguous. *Moro* raiding parties varied from small bands of just a few *caracor*s to massive operations involving a hundred or more vessels and thousands of men. In 1602 Spanish sources reported the arrival of a raiding party of one hundred vessels. In 1616 a Mindanao-based fleet of sixty *caracor*s attacked the Spanish shipyard at Pantao in Camarines

⁵²³ James Francis Warren, *The Sulu Zone: The Dynamics of External Trade, Slavery, and Ethnicity in the Transformation of a Southeast Asian Maritime State* (Singapore: National University of Singapore Press, 1981); Nicholas Tarling, *Piracy and Politics in the Malay World: A Study of British Imperialism in Nineteenth-Century Southeast Asia* (Singapore: Donald Moore, 1963).

(in Southern Luzon), absconding with two Franciscans and 400 *Indios*.⁵²⁴ Another raid mounted from Jolo in 1627 was reported to have included more than a thousand men.⁵²⁵ Their targets were vulnerable settled costal regions throughout the Visayas, though they occasionally raided as far north as Luzon. *Moros* often targeted Spanish shipyards, not as a means to strategically weaken the Spanish position in the Philippines, but rather because shipyards had large concentrations of able-bodied laborers ripe for abduction. The overarching objective of these raids was always to secure as many captives as possible and to avoid a full-on engagement with the enemy.⁵²⁶ The onslaught of *Moro* raids was a nearly constant threat for much of the late sixteenth and early seventeenth century. In his history of the Philippines, Zuñiga wrote that “these *Moros* have not ceased to infest our colonies; innumerable are the Indians they have captured, the towns they have looted...It seems as if God has preserved them for vengeance on the Spaniards...”⁵²⁷

In 1621, a Spanish account estimated that some 10,000 Christian *Indios* had been abducted by seaborne raids since the colony’s founding, mostly taken from shipyards.⁵²⁸ In 1599 a fleet of fifty *caracoas* ransacked the islands of Cebu, Panay, and Negros, burning coastal settlements and taking hostages.⁵²⁹ The first half of the seventeenth century was by far the heaviest period of raiding in the history of the Philippines. Such periodic raids had lasting effects on the Spanish Philippines. For example, there can be no doubt that *Moro* raids were at least in part responsible for the general decline of recorded *Indio* subjects across the colony, which

⁵²⁴ Corpuz, *Roots of the Philippine Nation*, 1: 143.

⁵²⁵ Corpuz, *Roots of the Philippine Nation*, 1: 141, 143.

⁵²⁶ Many Spanish accounts readily acknowledge the raid-and-capture style of seaborne warfare they and their subjects were the targets of in Luzon and the Visayas. Miguel de Loarca, in his comprehensive report on Philippine culture and society, noted that “quando van a robar si pueden traer viuo al enemigo no lo matauan, y si Alguno mataua...” Miguel de Loarca, “Relacion de las Yslas Filipinas,” June 1582, Blair and Robertson, 5: 148 – 150.

⁵²⁷ Onofre D. Corpuz, *The Philippines* (New York: Prentice Hall, 1965), 129 – 130.

⁵²⁸ Morga, *Sucesos de las Islas Filipinas*, Blair and Robertson, 15: 265.

⁵²⁹ Corpuz, *The Philippines*, 129.

dropped from 610,000 in 1621 to 505,000 in 1655. The Jesuit parish registers of the Visayas—a region especially prone to frequent raids—reflected a proportionate drop in population from a high of 74,000 to 52,000 by 1659.⁵³⁰ This is not to say that the decline in population was caused solely through raids. As is more likely the case, Spain’s Philippine colony suffered a drop in its subject population largely when inhabitants fled their homes, both to avoid *Moro* raids as well as to avoid the increased labor and tax demands of their colonial masters in times of war. As part of the *Moro* conflict, and to make up lost numbers, Spaniards were authorized to enslave Muslim aggressors. While many *Moro* attackers were captured and forced into labor by the Spanish in the Philippines, it was nowhere near enough to make up for those tributes that had been abducted.⁵³¹ Depending upon hostile laborers was dangerous and unpredictable; utilizing *Moros* as rowers was certainly far from ideal in the eyes of the colonial government in the Philippines. Nevertheless, it is indicative of Spain’s dwindling labor resources that when *Moro* raiders were captured they were not imprisoned but made to work as rowers, thus filling the occupations of the very *Indios* that their fellow *Moro* raiders had absconded with.

We may turn here once again to the 1619 report of Captain Sebastián de Pineda, who wrote at length on the impact of the *Moro* Wars and the role Christian *Indios* played in defending the colony.

...in the former year of six hundred and seventeen [1617] the Mindanao enemy captured four hundred native carpenters and killed more than two hundred others. The year before that, six hundred and sixteen [1616], in the expedition made by Don Juan de Silva to the strait of Cinacapura, where he died, it was found from lists that more than seven hundred Indians, of those taken as common seamen (of whom more than two hundred were carpenters), died on that expedition. Before that, in the year six hundred and fourteen

⁵³⁰ Pearson, “The Spanish ‘Impact’ on the Philippines,” 182; Phelan, *The Hispanization of the Philippines*, 100 – 101.

⁵³¹ By 1606 there were only fifty Muslim captive slaves working as rowers for Spain’s galley fleet in the Philippines. Phelan, *The Hispanization of the Philippines*, 137.

[1614] the said Mindanao enemy captured the islands of Pintados nine hundred odd Indians, of whom but a few have been ransomed.⁵³²

If we are to take de Pineda at his word, of the number of *Indios* employed by the Spanish and the number subsequently abducted through *Moro* raids, neither were inconsequential.

When considering this Muslim threat to the Catholic Philippines, Spain's struggle to maintain its hold over its Southeast Asian colony appears to be a largely maritime battle, with both *Moro* attackers and *Indio* defenders taking to the sea.

The government in Manila orchestrated many seaborne counter attacks to combat *Moro* raids. It is curious to note that such counter attacks took on the character of slave raids themselves, utilizing the light and swift *caracor*s to strike back at *Moro* coastal settlements. In the last years of the sixteenth century Don Juan Ronquillo, the nephew of the Governor General of the colony, was charged with overseeing the pacification of the hostile Muslim settlements of the southern Philippines. His strike force consisted of "300 Spaniards, and above 1500 Natives of the Philippines, with Amunition, Provisions, and Seamen... three Great Ships, and a considerable Number of Smaller Ones."⁵³³ In 1627 the Spanish assembled a fleet comprised wholly of *caracoas* at Cebu and Oton for the purposes of counter attacking the *Moros*. Here then we can see that by turning to the light and swift *caracora*, the Spanish were in many ways attempting to adopt the exact same raiding tactics and tools used by the *Moros*. From a larger point of view, Spain's local maritime operations in the Philippines were little more than a continuation of the pre-colonial slave raiding system of warfare that had existed for centuries in maritime Southeast Asia. William Henry Scott rightly characterizes Spain's war with the Muslims of the Southern Philippines as a case of "fighting fire with fire," where the Spanish

⁵³² De Pineda, "Philipine Ships and Shipbuilding," 1619, Blair and Robertson, 18: 182.

⁵³³ Argensola, 112. "Great Ships" refers to those of European design while "Smaller Ones" presumably refers to locally built *caracor*s, praus, and other such vessels.

conducted raid-style operations of their own.⁵³⁴ And not only were the vessels Spain used in these wars local in design and construction, but the crews were largely made of local seafarers. Aboard the 30 – 40 *caraoras* of the 1627 fleet were a mere 200 Spaniards accompanied by 1,600 *Indios*.⁵³⁵ In 1638 Governor Sebastián Hurtado de Corcuerra commanded a fleet of eighty vessels against Muslim Sulu, aboard which were 600 Spanish and 3,000 *Indios*.⁵³⁶ Such ratios were typical for most of Spain’s maritime operations in the Philippines, with only a small contingent of Spaniards overseeing the duties of thousands of native subjects. Perhaps the best example of Spain’s dependency upon local *Indio* seafarers and local vessel designs for colonial maritime defense is to be found in the 1621 report of Governor Don Alonso Fajardo de Entenza.⁵³⁷ He outlines not only the reliance upon *Indios* as sailors and rowers, but the need to adopt native boat designs to ward off *Moro* attacks.

There are no other vessels belonging to the enemy that can secure any advantage over them, for our vessels, to aid in fighting, can carry very good artillery; and, as for going about where occasion arises to punish or intimidate the Indians, they are excellent— although for attacking the vessels with which those called Mindanaos, Xoloans, and Camucones (who are bad neighbors of ours) usually sally out, we need other boats like theirs.⁵³⁸

Bartolome Leonardo de Argensola’s history of the early Spanish Philippines stated bluntly that in Southeast Asia the style of warfare was wholly different to what the Spanish were accustomed to. Speaking of strategy generally, Argensola states that in Southeast Asia, “...making War

⁵³⁴ Scott, *Boatbuilding and Seamanship*.

⁵³⁵ Scott, *Philippine Boatbuilding and Seamanship*, 17. Scott goes on to say that, “the fighting elite who manned the decks in these warships counted less than a quarter of the ship’s total complement. But the whole crew, oarsmen and all, were fighters in the shore raids and were promoted from outboard to inboard in recognition of their valor in action.”

⁵³⁶ Fred V. Magdalena, “Colonization and the Moro-Indio Conflict in Mindanao,” *Center for Philippine Studies, University of Hawaii at Manoa, Discussion Paper 3* (1990), 3.

⁵³⁷ This is the same Governor of the Philippines who murdered his wife and her lover in 1621.

⁵³⁸ Don Alonso Fajardo de Entenza, “Report of 1621,” Blair and Robertson, 20: 150 – 151.

depends on Ambushes, and Stratagems, where Subtlety supplies the place of Strength... It is rare that either side is much weakend; because as soon as sensible of the others Advantage, the Weaker flyes, and reserves himself for better Fortune; nor do they look upon it as Dishonourable to fly, for in those Party they have but rude Notions of the Laws of Honour.”⁵³⁹ Spaniards eventually developed similar raiding-style tactics and hit back at their Southeast Asian enemies in native *caracoras*.

Looking now to Spain’s maritime war with the Dutch we see a vastly different situation, both in terms of the severity of the threat and the tactics used. However violent and effective *Moro* raids, Spain’s Muslim enemies in Southeast Asia had no desire or notion to conquer Spain’s Asian holdings outright. The VOC, in contrast, harbored both the desire and the means to completely displace Spanish enclaves in the Philippines. Reports from Manila in the early seventeenth century seem to agree that the arrival of the Dutch posed the most serious threat to Spain’s colony and that extreme wartime measures were required if the small and distant outpost was to endure the advances of the mighty Dutch navy. By all accounts it would seem that the Dutch should have easily defeated the defensive forces of the remote Spanish outpost and taken the port of Manila, which was regarded by many contemporaries as the finest harbor and richest entrepôt in all of Asia.⁵⁴⁰ From roughly 1600 to 1650 the Dutch had been wildly successful in establishing a commercial network based in Java, Malacca, and the Spice Islands, and from there brushing aside Iberian forces throughout the Indian Ocean, Southeast Asia, and East Asia. Jonathan Israel minces no words when he claims that the Dutch were the strongest European

⁵³⁹ Argensola, VI: 92.

⁵⁴⁰ Kamen, 197 – 238.

power in Asia in the early seventeenth century.⁵⁴¹ As early as 1600 a Dutch fleet had entered the Philippines looking to capture if not Manila, then at least a Manila galleon. Following the establishment of the VOC, the Dutch rapidly made steady advances in sweeping aside Iberians from the key commercial centers of maritime Asia. Not even the Twelve-Year Truce of 1609 – 1621 stopped the Dutch onslaught in Asia. The VOC seized the opportunity of a quiet European theater to put further pressure on the Iberians overseas. Upon establishing a number of their own bases in Southeast Asia (including their headquarters at Batavia in 1619) and wresting control of the Moluccan spice trade from the Portuguese, the Dutch desired to gain control of the next most valuable commercial sector in Asia: Spain's trade with China via Manila. To this end a fleet of ten Dutch ships blockaded Manila in 1616 - 1617 and in 1621 - 1622 a second Dutch fleet blockaded trade between Manila and China in an attempt to cut off Iberian commercial access to mainland Asia and thus secure the Philippines.⁵⁴² By the 1620s the VOC was thoroughly entrenched in the region and was able to bring force to bear on Manila from any number of directions, including Batavia, the Spice Islands, Japan, Formosa, and numerous points beyond. Occasional joint expeditions with their fellow Protestants, the English, only served to strengthen the threat posed to the Catholic Philippines.⁵⁴³

⁵⁴¹ Jonathan I. Israel, *Dutch Primacy in World Trade, 1585 – 1740* (Oxford: Clarendon Press, 1989), 103.

⁵⁴² Glete, *Warfare at Sea*, 172; Tien-Tse Chang, "The Spanish-Dutch Naval Battle of 1617 outside Manila Bay," *Journal of Southeast Asian History*, 17 (1966): 115 – 118. The fleet dispatched to Manila was under the command of Jan Dircksz Lam and comprised some 550 men and ten vessels.

⁵⁴³ When it came to long distance maritime expeditions, necessity and distance from home often allowed for joint operations, if not alliances, between two or more forces operating in Southeast Asia. Ethnic, religious, and proto-nationalist frictions certainly served to push competing European expeditions into conflict. However, occasional common interests often overcame such differences and allowed for alliances, especially when so far from the metropolises of Europe. At the same time, would-be allies, such as the Spanish and Portuguese during the union of the two crowns, often did not translate into cooperation in distant Asian waters. For more on the issue,

The Spanish ultimately managed to endure the Dutch onslaught of the seventeenth century, but only through an intensified exploitation of their *Indio* subjects in the Philippines. Archbishop Miguel García Serrano outlined a direct correlation he observed between preparations made in the Philippines for warding off eminent Dutch attacks on the one hand and the intensified abuse of *Indios* through over taxation and overwork on the other.⁵⁴⁴ While the Archbishop claimed that the treatment of the *Indios* by the religious had been relatively benign during the Dutch wars, the wartime government had taken to abusing the natives to an extreme:

I consider as inexcusable the vexations that have come and are coming upon the Indians in the building of ships and the making of other preparations to defend us; for these would be very much less if the Indians were paid for their work as your Majesty orders, if they were placed in charge of disinterested persons, and if compassion were shown them.⁵⁴⁵

The church often blamed the colonial government and the government blamed church institutions when it came to *Indio* abuse. This letter is yet another example of this back-and-forth. However, the bias underlying such accusations should not distract from the fact that the Archbishop underscored shipbuilding as the central problem. *Indio* rowers and shipbuilders were rarely paid, often overworked, and, it would seem, hardly shown Christian compassion. But not all service to the Spanish in the name of fighting the Dutch went unrewarded. In one noteworthy example, the widow of a Pampangan *datu* who died while fighting the Dutch was awarded six *casas de reservas* for her lands.⁵⁴⁶ This was no small reward as *reservas* were carefully limited

see Fabio López-Lázaro, Labour Disputes, Ethnic Quarrels, and Early Modern Piracy: A Mixed Hispano-Anglo-Dutch Squadron and the Causes of Captain Every's 1694 Mutiny," *International Journal of Maritime History* 22 (2010): 73-111.

⁵⁴⁴ Blair and Robertson, 20: 76.

⁵⁴⁵ Miguel Garcia Serrano, "Letter of the Archbishop to the King," 1622, Blair and Robertson, 20: 245.

⁵⁴⁶ Roth, 123 – 124.

by the government and the creation of new *reservas* were in normal circumstances accompanied by a litany of fees and taxes.⁵⁴⁷

Ultimately the 1616 - 1617 Dutch blockade proved ineffective with both Spanish and Chinese merchant forces tactfully fighting back. Soon thereafter another blockade was attempted in 1620 - 1621, this time with Dutch and English forces under the joint command of Robert Adams and Willem Jansz. In the Philippines, Governor Alonso Fajardo de Entenza reported that,

The news of the confederation of the Dutch and the English proved to be correct; and on the second of February they arrived on these coasts, with nine ships of war—seven large and two of moderate size, five of them being Dutch and four English—with the number of a thousand to twelve hundred men of both nations, exclusive of the servants and Japanese; they carried between forty and forty-four pieces of artillery, in each of the large ships, and the others each according to its capacity. It has been learned that this is true from the depositions of two prisoners, and from Chinese who were in their ships; from Japanese who, while coming from their land with provisions and supplies for this country, passed by the enemy, saw them, and entered their vessels; and likewise from the advices which I have received from Japan.⁵⁴⁸

The repeated attempts at blockading Manila were made by Dutch forces that knew full well the Spanish port was the a key link in the lucrative Chinese maritime commercial network in the South China Sea trading zone. European forces, being unable to conquer Chinese ports directly, sought the closest and most heavily trafficked intermediary port available, which was Spanish Manila. We must view this then not only as a disruption of just Spanish commerce but of Chinese commerce as well. Indeed, Chinese merchant mariners were openly hostile to the forces of Adams and Jansz. The crew of one Chinese junk that had been detained by the Dutch while attempting to enter Manila during the 1620 - 1621 blockade resisted by pouring boiling sugar on

⁵⁴⁷ According to Roth, a *datu/principal* holding just a single *reserva* in the mid to late seventeenth century was subjected to a 4 peso *media-anata*, fees for the documentation, as well as a tax of 30 pesos every three years for every *reserva*. Roth, 124.

⁵⁴⁸ Alonso Fajardo de Entenza, "Letter of the Governor to King Philip III," 1621, Blair and Robertson, 20: 46.

fourteen Dutchmen who attempted to board their vessel, sending them “to hell in the form of candy.”⁵⁴⁹

Indios were impacted both on land and at sea by this extended period of maritime warfare with the Dutch. Just like in the concurrent wars with *Moro* raiders, *Indios* were taken to the sea aboard vessels of both Spanish and native design. Writing in 1620, Alonso Fajardo de Entenza reported to the King Philip III that in response to reports of three Dutch ships lurking near the San Bernardino Strait—presumably to intercept that year’s arriving galleon from Acapulco—he had all of Manila’s “galleys and light craft manned so that they might go out immediately...”⁵⁵⁰ The galleys he speaks of were oared vessels built in the Philippines and manned by *Indio* rowers. “Light craft” is frequently used in Spanish reports to refer to both small vessels of European design as well as local vessels like the *caracora/prau*, which were again manned by *Indios*. In this particular instance, Entenza reports, the incoming Acapulco galleon—laden with silver—made contact with the three Dutch vessels at San Bernardino and rather than lose the ship to capture, her captain instead beached the vessel and had its cargo unloaded as quickly as possible. Entenza thanked God that high winds and stormy weather prevented the Dutch from landing ashore and disrupting the transfer of cargo.⁵⁵¹ However, Fajardo does not make mention of the laborers who unloaded the vessel nor the means by which its valuable cargo of silver was ferried from San Bernardino to Manila Bay—this no doubt was only possible with great numbers of *Indio* mariners working aboard scores of smaller local vessels.

⁵⁴⁹ Otto van den Muijzenberg, *1600 – 2000: Four Centuries of Dutch-Philippine Economic Relations* (Manila: Royal Netherlands Embassy in Manila, 2001), 118.

⁵⁵⁰ Alonso Fajardo de Entenza, “Letter to Philip III,” 15 August, 1620, Blair and Robertson, 19: 90 – 91.

⁵⁵¹ Alonso Fajardo de Entenza, “Letter to Philip III,” 15 August, 1620, Blair and Robertson, 19: 90 – 91.

While government officials such as Fajardo were reluctant to acknowledge the contributions of *Indios* at sea, critics of government policy were quick to note the large numbers of *Indios* conscripted into service and frequently subjected to harsh treatment. Reporting on the very same beaching incident as Entenza, Fray Pedro de Santo Pablo, a provincial minister in the Philippines, painted things in a very different light. Fray Pablo lamented that such operations as the rescue of the galleon in 1620 necessarily involved scores of *Indio* seamen and shipbuilders who rendered their services without pay. Of the galleon purposely wrecked and unloaded, Fray Pablo reports that “two hundred and eighty persons died in the flagship, and the rest arrived in a dying condition.”⁵⁵² The brief report goes on to suggest that wartime shipbuilding cost many *Indios* their lives, and that many could be saved if paid Chinese laborers were used instead. Additionally, he recommends that instead of forcing *Indios* into service at sea as the demands of war dictate, that a system should be established whereby a dedicated fund be set up to pay volunteers for their services and that any unwilling to go to sea should not be forced to do so.⁵⁵³ These suggestions, however well intended, fell on deaf ears. Complaints of *Indio* abuse and proposed remedies as those outlined by Fray Pablo are typical of religious arguments seeking to protect the subject population and the larger Christian community. Similar logic was at work in many other religious reports from the Philippines, including the 1583 report of Domingo de Salazar, for example.

The social impact of the maritime wars of 1600 – 1650 on the Philippines was no small matter. The Dutch and English assaults and blockades of Manila combined with their predation upon Chinese merchant vessels inflicted a noticeable decline in commerce, the lifeblood of

⁵⁵² Fray Pedro de Sant Pablo, “Compulsory Service by the Indians,” 7 August, 1620, Blair and Robertson, 19: 71 – 76.

⁵⁵³ Fray Pedro de Sant Pablo, “Compulsory Service by the Indians,” 7 August, 1620, Blair and Robertson, 19: 71 – 76.

Spanish Manila. At the same time, constant raiding from the *Moros* of Mindanao and Sulu opened a second front that drained the Spanish Philippines of resources and manpower. One could argue that warfare in the distant Philippines was one part of a general crisis throughout Spain's larger empire in the seventeenth century. The decline in commerce and the increase of hostilities at Manila can (and should) be viewed an extension of a larger European, and even global, conflagration between Castile and the Low Countries. From another angle, the crisis of the seventeenth-century colonial Philippines can be seen more simply as being part of a general waning of Spain's global empire.⁵⁵⁴ Dutch blockades and *Moro* raiding parties all served to disrupt the colony's food supply, demographics, commerce, and economy. The most dramatic indicator of the impact that seaborne warfare had upon Philippine society can be found in the tribute registers of the colonial government and local churches. In 1591, prior to the Dutch war and before *Moro* raids had become an endemic problem, Spaniards claimed some 667,600 *Indios* as their subjects out of a total estimated population of roughly 1.25 million.⁵⁵⁵ Following the

⁵⁵⁴ It should not go unnoticed that Spain's half-century of turmoil and depression in the Philippines coincided with a much larger "Century of Depression" in New Spain as well as a century of "decline" in Spain's empire generally. One may also draw parallels between the social-economic crisis in the seventeenth-century Philippines and the general crisis throughout Europe and the world at this time. I propose that the global-scale of this period of economic turmoil and warfare may simply be a logical symptom of the Hispano-Dutch war, which was very much global in scale, involved all the major states of Western Europe, and was directly responsible for disrupting colonial commerce world-wide. For standard works on Spain's seventeenth century decline see Earl J. Hamilton, "The Decline of Spain," *Economic History Review*, 8 (1937): 168 – 179; J. H. Elliott, "The Decline of Spain," *Past and Present*, 20 (1961): 52 – 75; T. H. Aston ed., *Crisis in Europe, 1560 – 1660* (London, 1965); Henry Kamen, "The Decline of Spain: A Historical Myth?" *Past and Present*, 81 (1978): 24 – 50. Woodrow Borah, *New Spain's Century of Depression* (Berkeley: University of California Press, 1951); Trevor Davies, *Spain's Century of Decline, 1621 – 1700* (London: 1957). The debate regarding Spain's decline is now long out of vogue. Recent works have framed the debate in a global context however. See Parker and Smith, *The General Crisis of the Seventeenth Century*; Parker, *Global Crisis*.

⁵⁵⁵ Corpuz, 1: 530 – 531. Corpuz arrives at this figure by combining royal tributes belonging to crown estates with the much larger figure of private and *encomienda* tributes.

outbreak of the Hispano-Dutch war in Southeast Asia and the beginning of *Moro* raids, *Indios* were made to shoulder ever greater labor and tribute burdens. Ship production accelerated and payments diminished even further throughout the first half of the seventeenth century. The death toll no doubt rose during this time, but so too did the number of *Indios* who simply fled their homes and their labor obligations, thus disappearing from tribute registers. John Leddy Phelan assumes abandonment of lands and homes to be the leading cause of Spain's declining subject population in the seventeenth century.⁵⁵⁶ By 1609 Spaniards counted nearly 600,000 tributes under their control in the Philippines. By 1618 that number had dropped to 523,752 tributes following nearly two decades of war. By 1655 the subject population of the Spanish Philippines was down to 433,098.⁵⁵⁷

Indios aboard the Manila Galleons and Across the Pacific

The first instance of an *Indio* of the Philippines being drawn across the Pacific to New Spain occurred in 1565 during the first voyage to successfully sail eastward from the Philippines back to the New World. Finding a return route across the vast *Mar del Sur* was one of the major obstacles that remained to be overcome when Legazpi arrived in the Visayas earlier that same year. The vastly experienced Andrés de Urdaneta, who before joining Legazpi's expedition had been a part of Loaisa's disastrous Pacific voyage decades before, was brought out of retirement for the sole purpose of discovering the return route across the Pacific. The return route had eluded Spain's men of the sea ever since Magellan's *Trinidad* attempted and failed to sail

⁵⁵⁶ Phelan, "Free Versus Compulsory Labor," 193 – 194.

⁵⁵⁷ Corpuz, 1: 530 – 534.

eastward across the Pacific in 1521.⁵⁵⁸ After Legazpi had secured a tentative foothold on Cebu, Urdaneta was given the task of taking the flagship *San Pedro* back to New Spain with the hopes of at long last linking Asia to the Americas and thus establishing a roundtrip circuit across the world's largest ocean. Aboard the *San Pedro* were the vessel's seventeen-year-old commander and grandson of Legazpi, Felipe de Salcedo, the elderly Andrés de Urdaneta, some 200 sailors, as well as three natives of Cebu and a Chamorro.⁵⁵⁹ (An alternate account claims that eight Cebuanos made the voyage).⁵⁶⁰ The Cebuanos were taken aboard to act as pilots, and it seems they served Salcedo and Urdaneta well as the *San Pedro* did not make the mistake of striking off directly eastward into the Pacific, but instead sailed due north through the Visayas to a passageway wholly unknown to Spanish seafarers at that time. The *Indios* aboard the *San Pedro* furnished the vital information needed for Spain's men of the sea to establish a Pacific return route, directing the Spaniards through the San Juanico Strait between Leyte and Samar and into the Pacific via the San Bernardino Strait. Once out of the Visayas and clear of Luzon the *San Pedro* was able to sail north and capture the steady westerly winds above 30° N.⁵⁶¹ Although credit for the discovery of the eastbound leg across the Pacific typically goes to the vastly experienced Andrés de Urdaneta, we must not discount the more likely scenario that the founding of what was soon to become the eastward leg of the Acapulco-Manila galleon trade route owes more to *Indio* mariners than it does to Spanish mariners. Despite the many dangers

⁵⁵⁸ For more on the fascinating and globe-spanning life of Andres de Urdaneta refer to Mairin Mitchell, *Friar Andrés de Urdaneta, O. S. A.* (London: McDonald and Evans, 1964); Mariano Cuevas, *Monje y marino: la vida y los tiempos de fray Andrés de Urdaneta* (Mexico: Galatea, 1943).

⁵⁵⁹ Noone, 330. See also Lorraine Crouchett, *Filipinos in California: From the days of the Galleons to the Present* (El Cerrito, CA: Downey Place Publishing House, 1982). Crouchett claims 8 *Indios* were aboard the *San Pablo* though her source material is not made clear.

⁵⁶⁰ For varying figures in this regard, see Mercene, 3; Crouchett.

⁵⁶¹ Noone, 330 – 331; Spate.

posed by the San Bernardino Strait, the channel would serve as the most reliable means to enter and depart the Philippine archipelago. Nearly every subsequent galleon voyage for the next 250 years would arrive and depart via the channel between Luzon and Samar.⁵⁶²

Historians of Spain's trans-Pacific commerce with Asia have overwhelmingly focused on the westbound voyage to Manila, concentrating on the cargos of silver above all else.⁵⁶³ Ignoring the equally important eastbound voyage to Acapulco is to ignore "the multifaceted cultural influence of Asians in New Spain..."⁵⁶⁴ But before *Indios*—or *Chinos*, as they were re-categorized in New Spain—could enter colonial society in the New World, they had to endure what was the most grueling voyage in all of early modern seafaring. While a westbound crossing from New Spain to the Philippines was a direct route and took only three to four months to complete, the return leg eastbound was a punishing six to nine months, during which time as many as one hundred crewmen and passengers could die.⁵⁶⁵ Making matters worse, the eastbound galleon was often overloaded with trade goods like silks and porcelain to maximize profit, thus only the bare minimum of food and water was taken aboard. It was often the case that there was only just enough food and water to reach the Pacific Northwest coast of the Americas where more supplies could be taken on before pressing on to Acapulco. When supplies did begin to run short, as often happened, *Indio* crewmen were the first to be denied rations. Wages for *Indio* crewmen were often below subsistence levels, conditions were harsh, and fatality rates were high. Where a European or Creole sailor received 350 pesos for a Pacific round-trip voyage

⁵⁶² See Chapter 1. Scott, *Boat Building and Seamanship*, 19.

⁵⁶³ Ed Slack claims that historians have recently become "blinded by silver." Slack, 36.

⁵⁶⁴ Slack, 36.

⁵⁶⁵ William J. McCarthy, "The Fiesta de las Señas and Life Aboard Spain's Pacific Galleons," *Mains'l Haul*, 38 (2002): 21. Eastbound galleons departed the San Bernardino strait and used the Kuro Suwa current to sail north as far as 41°N before rounding back down along the length of the Pacific coast of the Americas. The great arc traveled by the eastbound galleon greatly extended the length of the voyage.

in 1697, *Indios* were paid as little as 48 pesos.⁵⁶⁶ Often times, these wages were withheld to ensure that the crew, once at Acapulco, would not flee and leave the vessel without a crew for the return voyage. Hernando de los Ríos Coronel, in his call for better treatment of *Indio* sailors, recounted the many abuses he witnessed during his Pacific crossing in the mid seventeenth century.⁵⁶⁷ Coronel noted that the daily ration of an *Indio* aboard a galleon was less than half that of a Spaniard. He further observed that towards the end of the voyage, when food was running short, the rations for the *Indios* were the first to be cut. In addition to food shortages, Coronel reported a particularly high fatality rate amongst those *Indios* due to freezing temperatures.⁵⁶⁸ Without the proper clothing, Coronel writes, “when each new dawn comes...there are three or four dead men.”⁵⁶⁹ A galleon crossing from Manila to Acapulco could reach as high as 41° N latitude, where the temperature at night was low enough to freeze many crewmen to death. Generally, *Indios* aboard Manila galleons were “treated like dogs.”⁵⁷⁰

Fatality rates were particularly high in the early galleon trade with starvation and malnutrition the leading causes of death and sickness for sailors on the open Pacific. The Italian traveler Francesco Gemelli Carreri, after taking a galleon voyage in the late seventeenth century, wrote that even with adequate rations the experience was “enough to destroy a man, or make him unfit for anything as long as he lives.”⁵⁷¹ In 1755 the *Santisima Trinidad*, to take one extreme

⁵⁶⁶ Schurz, *The Manila Galleon*, 211.

⁵⁶⁷ For more on the career of Coronel in the Pacific and the Philippines, see John Newsome Crossley, *Hernando de los Ríos Coronel and the Spanish Philippines in the Golden Age* (London: Ashgate, 2011).

⁵⁶⁸ Schurz, *The Manila Galleon*, 212.

⁵⁶⁹ Schurz, *The Manila Galleon*, 212.

⁵⁷⁰ Schurz, *The Manila Galleon*, 211; Guevarra, “Filipinos in Nueva España,” 391 – 394.

⁵⁷¹ Giovanni Francesco Gemeli Carreri, *A Voyage to the Philippines [1697]* (Manila: Filipiniana Book Guild, 1963), 157.

example, weighed anchor in Acapulco with only “twenty-seven persons aboard able to stand.”⁵⁷² And what is far and away the most morbid claim regarding Pacific attrition comes from William L. Schurz, who wrote that in 1657 the *San Jose*, drifting with the currents, made its way to New Spain with not a single person left alive.⁵⁷³

Indios subject to these high fatality rates were serving not only as crewmen, but were being taken across the Pacific as outright slaves and concubines in many cases. The high demand for labor in the New World following the decimation of American indigenous populations during the conquest and subsequent epidemics fueled a demand for labor imports not just from the Atlantic, but from the Pacific as well.⁵⁷⁴ Historian Ed Slack Jr. notes that it was not until 1673 that a royal decree was issued expressly forbidding the enslavement of *Chinos* in the New World, but the practice continued nevertheless.⁵⁷⁵ Similarly, the habit of Spanish mariners and officials bringing *Indio* women with them aboard the galleons as concubines was an often enough occurrence that it too was outlawed by royal decree in 1608.⁵⁷⁶

Enduring such torturous conditions led many *Indios* to simply run away once in New Spain. Perhaps the most widely known example of *Indio* desertion in the New World occurred in 1618 when all but five of the seventy-five *Indio* crewmen of the *Espiritu Santo* fled the ship, presumably settling in Mexico permanently.⁵⁷⁷ This frustrated Spanish officials for a number of reasons, but mainly because it left the galleon without a crew for the return voyage to the Philippines. Soon thousands of *Indios* had taken root in New Spain. Sebastián de Pineda’s report

⁵⁷² McCarthy, 21.

⁵⁷³ This claim is repeated in McCarthy, “The Fiesta de las Señas,” though I have been unable to find source material supporting this story. Schurz, frustratingly, offers no citations.

⁵⁷⁴ Slack, 41 – 42; Guevarra, 409; Gonzalo Aguirre Beltran, “The Slave Trade in Mexico,” *Hispanic American Historical Review* 24 (1944): 419 – 421.

⁵⁷⁵ Slack, 41 – 42; the edict was issued on 21 April, 1673.

⁵⁷⁶ Guevarra, 392.

⁵⁷⁷ Zaide, I: 335

of 1619 felt the problem of *Indios* abandoning the galleons in New Spain was particularly threatening to the stability of Spain's Pacific empire. "Of those that depart with the eastbound galleon," he writes, "...scarcely any of them return to the said Filipinas Islands...it results that your Majesty loses the royal revenues derived from those islands, inasmuch as all those Indians are tributaries there, and when absent pay nothing." Sizable diaspora communities formed in not just Acapulco, but in the key port towns of Navidad, Zihuatenejo, Puerto Vallarta, San Blas, and Texpan.⁵⁷⁸

With passenger and crew manifests missing for most galleon voyages there still remain many ways for historians to detect the presence of *Indios* aboard the Manila Galleons and in the New World.⁵⁷⁹ The archeological excavation of the *San Diego*, the Manila galleon which sank in 1600 while fighting off a Dutch invasion off the coast of Luzon, has revealed a diverse cargo that included a common betel nut container.⁵⁸⁰ The chewing of betel nuts (*Areca catechu*) was a habit of many Southeast Asian communities, including the Philippines. The custom was generally seen as off-putting if not disgusting by Europeans and therefore the betel nut container was likely the property of an *Indio* or some other Southeast Asian crewmember.⁵⁸¹ The presence of *Indios* in Acapulco and other coastal communities in New Spain was more broadly manifested in the emergence of a thriving *tuba* wine (*lumbanog*) industry. *Tuba*, or palm wine, is a spirit that can be distilled from the sap of the coconut palm (*Cocos nucifera*) and was widely consumed

⁵⁷⁸ Ed Slack Jr. provides a comprehensive list and map of major *Indio* communities in the New World in his article in the *Journal of World History*.

⁵⁷⁹ Burt.

⁵⁸⁰ Desroches et. al.; Jinky Gardner, "Archeology and the Galleons: 'Snapshots' of a Treasure Trade," *Mains'l Haul*, 38 (2002): 51 – 52.

⁵⁸¹ Though it is clear that *Indio* crewmen brought betel nut with them to New Spain for their own consumption, I have found no evidence of any efforts made by Filipinos to grow the areca palm in the Americas.

throughout the Philippines and Southeast Asia.⁵⁸² In the Philippines the base spirit was made into a milky white drink or could be further treated by mixing and aging the drink with the extract of the *Lauan* tree, giving the drink an opaque burgundy appearance and a stronger taste.⁵⁸³ With more and more *Indios* arriving to the New World aboard the Manila galleons there emerged a sizable diaspora community in Acapulco and other coastal towns. As evidence of their presence, by the early seventeenth century coconut groves had been established along the Pacific coast of New Spain to support the manufacture of Philippine *tuba*. By the early seventeenth century the drink had been widely adopted by Mexican society as *tuba fresca* but the manufacture of the drink remained in the hands of *Indio (Chino)* communities.⁵⁸⁴ It would seem that not only did the *Indios* of Spain's Pacific galleons introduce palm wine to the Americas, but they were at the same time responsible for the large-scale dissemination of the coconut palm as well. Although the exact history of the coconut palm's diffusion in the Pacific is a matter of debate, recent scientific research seems to indicate that while the plant had taken root along the Pacific coast of the Americas before the arrival of the Spanish, the Acapulco-Manila galleons and their *Indio* crewmen were a key agent in the coconut palm's diffusion throughout the New World.⁵⁸⁵ We can

⁵⁸² de Pineda, "Philippine ships and shipbuilding," Blair and Robertson 19: 176 – 177; Guevarra, 394.

⁵⁸³ Look at, Henry J. Bruman, "Early Coconut Culture in Western Mexico," *Hispanic American Historical Review*, 25 (1945): 212 – 223; Henry J. Bruman, *Alcohol in Ancient Mexico* (Salt Lake City, UT: University of Utah Press, 2000); Ramon Almario Jr., "Backyard Winery: Sobering Thoughts on a Potent Brew," in *Filipino Heritage: The Making of a Nation* (Manila: Lahing Pilipino Publishing, 1977 – 1978).

⁵⁸⁴ Guevarra, 394.

⁵⁸⁵ R. Gerard Ward and Muriel Brookfield, "The Dispersal of the Coconut: Did it Float or Was it Carried to Panama?" *Journal of Biogeography* 19 (1992), 467 – 480; Bruman, "Early Coconut Culture in Western Mexico." Hugh Harries, "Key to Coconut Cultivation on the American Pacific Coast: the Manila-Acapulco Galleon Route (1565 – 1815)," *Palms*, 56 (2012): 72 – 77; Charles R. Clement, Daniel Zizumbo-Villarreal, Cecil H. Brown, R. Gerard Ward, Alessandro Alves-Pereira and Hugh C. Harries, "Coconuts in the Americas," *The Botanical Review*, 79 (2012): 342 – 370. The history of the coconut palm's dispersal throughout the globe is a point of

say for certain that the Manila Galleons were vectors for a wide range of biological goods. The recent excavation of the *San Diego*'s cargo, a Manila galleon that sunk in 1600, not only contained coconuts, but peaches, chickens, pigs, nuts, and a variety of other flora and fauna.⁵⁸⁶ A more thorough assessment of the Acapulco-Manila Galleons as a vector for global biological exchange is needed. Far too much of environmental history of the early modern era focuses on Atlantic transmissions and neglects other trans-oceanic routes.⁵⁸⁷

The *Indio* community in the New World and their *tuba* wine industry was no small affair. Turning to Sebastián de Pineda once again, we see his concern that the *tuba* wine industry in New Spain was an indication of a larger drain of manpower that should have otherwise been retained aboard ship on the Manila galleons. He writes that,

There are in Nueva España, so many of those Indians who come from the Filipinas Islands who have engaged in making palm wine along the other seacoast, that of the South Sea...All the Indians who have charge of making that wine go to the port of Acapulco when the ships reach there from Manila, and lead away with them all the Indians who come as common seamen. For that reason...scarcely any of them return to the said Filipinas Islands.⁵⁸⁸

It would seem that based on Sebastián de Pineda's 1619 report that the *tuba* wine industry and the *Indio* diaspora community in New Spain was rather sizable. Contained in his report—which

historical and scientific debate. All research agrees that the coconut was indigenous to Asia, but how it came to be found along the Pacific coast of the Americas in the sixteenth century has been argued as either being a natural introduction via Pacific currents or as being introduced with the aid of human seafarers. Whether or not the Polynesians had introduce a small number of coconut palms to the America's before the advent of Spain's trans-Pacific shipping remains debatable. Whatever the case, the Manila-Acapulco galleons and their *Indio* passengers introduced coconut palms to the Americas in vast numbers, ultimately supporting the production of Philippine *tuba* wine.

⁵⁸⁶ Desroches, et. al., 70.

⁵⁸⁷ The standard works in this field include, Alfred Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900 – 1900* (New York: Cambridge University Press, 1989); Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492*, 30th Anniversary Edition (New York: Praeger, 2003).

⁵⁸⁸ de Pineda, "Philippine ships and shipbuilding," Blair and Robertson, 19: 176 – 177.

was in all likelihood composed in New Spain after his return from the Philippines—is a lengthy description of the economic dangers posed by Philippine wine makers in New Spain.⁵⁸⁹ *Tuba* wine was a particular threat, he warns, because it was palatable to so many in New Spain. In time, he warned, the wine will “become a part of the reason for the natives of Nueva España, who now use the wine that comes from Castilla, to drink none except what the Filipinos make.” He goes on, saying,

For since the natives of Nueva España are a race inclined to drink and intoxication, and the wine made by the Filipinos is distilled and as strong as brandy, they crave it rather than the wine from España. Consequently, it will happen that the trading fleets [from Spain] will bring less wine every year, and what is brought will be more valuable every year...It can be averted, provided all the Indian natives of the said Filipinas Islands are shipped and returned [to the Philippines], that the palm groves and vessels with which that wine is made be burnt, the palm trees felled...

This can be taken as evidence that *Indio* participation in the galleon trade was significant enough to create a diaspora community whose economic activities altered local consumption habits in the New World and threatened to disrupt at least a small portion of Spain’s trans-Atlantic commerce.

Considering the unwillingness of many to subject themselves to the hardships of Pacific navigation, Spain needed a ready and abundant source of crewmen to fill the ranks aboard their trans-Pacific galleons. By the early 1580s, the crews of Spain’s Pacific galleons were anywhere from 60 – 90% *Indio*, oftentimes with only the key administrative positions onboard filled by Spaniards, such as the ship master, captain, fiscal, supercargo, master gunner, and so forth.⁵⁹⁰ This reliance upon *Indios* to serve crewmen in the Pacific did not abate over time. The manifest

⁵⁸⁹ de Pineda, “Philippine ships and shipbuilding,” Blair and Robertson, 19: 176 – 177.

⁵⁹⁰ Schurz, *The Manila Galleon*, 210; Mercene, 3.

of the *La Santissima Trinidad*, sailing from Manila in 1755, listed 310 Philippine crewmen out of a total of 370 (84%). More remarkable still, 250 (68%) of these sailors came from the port of Cavite.⁵⁹¹ Unfortunately for historians, the logbooks of most every Manila Galleon have been lost.⁵⁹² The few glimpses we do get of the ethnicity of the galleon crews come from the occasional polemic written about the mistreatment of *Indios* or from the five instances when an English vessel captured a Spanish galleon in the Pacific. Following the heroic deed of capturing a Spanish galleon, those responsible took care to note the human and material cargoes of their new prizes. Thomas Cavendish captured the 700-ton *Santa Ana* in 1587 and discovered a total of 190 Filipino natives aboard.⁵⁹³ Commodore Anson's capture of the 700-ton *Covadonga* in 1743 won him 530 prisoners. Of the 266 crewmen of the vessel, half were non-European. There were an additional 177 *Indio* servants aboard making the entire complement roughly 60% of Asian origin.⁵⁹⁴ Woodes Rogers captured the *Nuestra Señora de la Concepción* in 1709 and took 193 prisoners, most all of Asian descent.⁵⁹⁵ In 1621, following the loss of the *San Nicholas* which sunk before it reached Acapulco, Governor Entenza wrote to the King assuring him that most of those lost to the sea were not Spaniards but "negroes and slaves."

On the ship San Nicolas three hundred and thirty persons died on account of its late departure from these islands...Although I was present at the dispatching of this ship and went out with it well outside of Cavite, it did not appear to me that, in regard to the people who were going, the ship was carrying half [of its quota]; for at most there are accustomed to go with the officers usually seventy seamen and gunners, more or less, according to the tonnage of the ships, although the number mentioned is for a ship of very large tonnage. With these there usually go as many more, Indians from this country,

⁵⁹¹ Slack, 39.

⁵⁹² Burt, 1630 – 1636.

⁵⁹³ Mercene, 30-31; Antonio de Morga, "Apendix A: Expedition of Thomas Candish," History of the Philippine Islands, part 4, vol. 1 & 2.

⁵⁹⁴ Glyn Williams, *The Prize of all the Oceans: Commodore Anson's Daring Voyage and Triumphant Capture of the Spanish Treasure Galleon* (New York: Penguin, 1999), 173; George Anson, *A Voyage Round the World in the Years MDCCXL, I, II, III, IV* (1748).

⁵⁹⁵ Woodes Rogers, *A Cruising Voyage Round the World* (London: 1712).

as common seamen, and some slaves that the said officers and the passengers are allowed to take with them for their service, paying the duties which are usually paid to your Majesty...and if so many died as is affirmed in the supposed relation, they were not Spaniards, because of these not many died. They must have been negroes and slaves...⁵⁹⁶

It is not difficult to prove with the available source materials that many natives of the Philippines and greater Southeast Asia were aboard Spain's Manila galleons. However, estimating the total number of *Indios* displaced to the New World as a result of the 250-year long galleon trade is rather difficult. For the broad classification of "*Chinos*," Ed Slack Jr. proposes the minimum figure of 40,000 – 60,000 having made the Pacific crossing "while a figure double that amount (100,000) would be within the bounds of probability."⁵⁹⁷ Floro Mercene, dealing specifically with *Indio* migration, claims 60,000 native Filipinos made their way to the New World by 1815.⁵⁹⁸ Jonathan Israel estimates that during the course of the sixteenth century, the height of the galleon trade, 6,000 Asians arrived in New Spain every decade.⁵⁹⁹ One scholar has gone to an extreme. Jose Maria S. Luengo has proposed the unfounded number of 4,000,000 *Indios* enslaved and brought to the New World by Spaniards via the galleon trade. Luengo is adamant that the galleon trade should be viewed as foremost a slave trade parallel to that in the early-modern Atlantic, and that Manila functioned as a slave port similar to African Atlantic ports.⁶⁰⁰ While Luengo's use of the term slavery may be appropriate to some degree, we can

⁵⁹⁶ de Entenza, "Letter to King Philip III," 1621, Blair and Robertson, 20: 128 – 129.

⁵⁹⁷ Slack, 37.

⁵⁹⁸ Mercene, 3 – 5.

⁵⁹⁹ Jonathan Israel, *Race, Class, and Politics in Colonial Mexico, 1610-1670* (Oxford: Oxford University Press, 1975), 75-76.

⁶⁰⁰ Jose Maria S. Luengo, *A History of the Manila-Acapulco Slave Trade, 1565-1815* (Tubigon, Philippines: Mater Dei Publications, 1996), 7; Jose Maria S. Luengo, *Lorenzo Ruiz: The Filipino Protomartyr in Nagasaki* (Tubigon, Philippines: Luengo Foundation Incorporated, 1984), 20-34. As if his proposed figure of four million were not controversial enough, in *Lorenzo Ruiz* Luengo uses the term "holocaust" when discussing the depopulation of the Philippines as a result of the

dismiss his proposed figure of 4,000,000 on the grounds that it is unsupportable and impossible given the logistics of the galleon trade, the limited number of *Indio* subjects in the Philippines, and the fact that transporting four million people across the Pacific would have required many times more vessels than existed in Spain's Pacific fleet.

While *Indios* were an ever-present fixture on Spanish vessels from the start of the galleon trade, the King of Spain limited the Acapulco-Manila traffic to a mere two vessels a year for a majority of the trade's history. While there was no doubt substantial (and unrecorded) private trade across the Pacific, we cannot safely claim that more than an average of two vessels made the round trip each year from 1565 to 1815.⁶⁰¹ Royal decree limited the galleon traffic to just one or two vessels a year for much of the route's history. And although some years did see far more than two ships per year sailing across the Pacific, assuming two galleons per year serves as a fair baseline estimate considering the many years when ship traffic was limited due to war with the English and Dutch as well as the many instances when galleons were either captured or lost at sea. An average of two inbound and outbound voyages per year over the span of 250 years would mean as many as 500 galleons arrived in Acapulco from Manila over the entire history of the Acapulco-Manila trade (that is 1565 to 1815). Such a high total seems unlikely. According to Bruce Cruikshank's statistical summary of Manila galleon traffic, we can only confirm 197 arrivals through the historical record. One faces similar challenges and uncertainties when it

galleon trade and Spanish occupation. This is a far cry from the "limited" impact Spanish colonialism supposedly had according to the social historians of the 1960s and 1970s!

⁶⁰¹ See Bruce Cruikshank's statistical summary of the Acapulco Manila galleon traffic.

<<https://sites.google.com/site/manilagalleonlisting/>>, accessed April, 2013. The total number of documented galleon arrivals at Acapulco from Manila for the entire history of the galleon trade is 197. There are many missing arrivals due to incomplete and missing records. Determining the true number of Manila Galleon voyages is difficult if not impossible. Those vessels arriving from Manila must not be confused with all the other shipping traffic coming into and out of Acapulco.

comes to estimating the average number of *Indios* aboard each galleon. We can be sure that the crews of these galleons—however many galleon voyages there were—were primarily *Indio* with very few Spaniards. The size of a galleon crew ranged depending upon the size of the vessel; while some ships were large enough for a crew of 400, most ships did not carry more than 200-250 persons. Using the largest reasonable estimate for both number of voyages to Acapulco and proportion of *Indio* crew, yields a maximum of 100,000 *Indio* immigrants to the New World via the galleon trade from 1565 to 1815.⁶⁰² If we assume the confirmed number of 197 arrivals is closer to the truth than the maximum of 500, the number of *Indios* transported to the New World would stand closer to Ed Slack Jr.'s minimum estimate of 40,000.

Not only were natives of the Philippines and other East and Southeast Asians active participants in Spain's trans-Pacific galleon trade, but by all measures it would seem likely that far more Asians traveled to the Americas than representatives of the Spanish crown did to the Philippines.⁶⁰³ Discerning who amongst these many thousands of Asian crewmen were truly from the Philippines is impossible, given the nature of the historical record. Once an *Indio*, Chinese mestizo, or Malay arrived at Acapulco, they were collectively absorbed into colonial Mexican society as "*Chinos*" or "*mestizos de Sangley*."⁶⁰⁴ Aside from the numbers of *Indios* (or *Chinos*) moving across the ocean, we must also recognize that not all of the Philippine immigrants to the new world in the early modern period were necessarily passive and unwilling participants in the Spanish imperial project. One need look no further than the story of Gaspar

⁶⁰² 500 voyages from Manila to Acapulco, multiplied by 250 *Indios* per voyage yields a total of 100,000. We must keep in mind that both the figure of 500 voyages and 250 *Indios* are the maximum possible within reason. In all likely hood, both the number of voyages and crew per vessel were a great deal less.

⁶⁰³ Mercene; Slack.

⁶⁰⁴ Slack, 38.

Molina to see that at least some small portion of Spain's Philippine subjects were integral and high-ranking actors in maintaining Spain's Pacific empire. Gaspar Molina, a native of the Philippines who lived in Acapulco and Baja California in the mid-eighteenth century, was a master shipbuilder who was brought to New Spain to oversee the construction of vessels.⁶⁰⁵ According to the account of historian Floro L. Mercene, who bases his research on the accounts of the Jesuit Miguel del Barco, Molina's services as an expert shipbuilder were recommended to a group of Jesuits seeking to establish a mission in Baja California by their chief procurator in Mexico City, Father Lucas Ventura.⁶⁰⁶ Molina was dispatched to the village of Loreto, where there was "a good stand of cedar trees."⁶⁰⁷ In 1761, once relocated to Loreto, Molina constructed a brigantine of moderate size named the *Nuestra Señora de la Concepcioin* for 18,000 pesos—presumably using cedar.⁶⁰⁸ He later oversaw the construction of the *Nuestra Señora de Loreto* in 1764 for the very same Jesuit mission.

Molina's career was certainly not illustrative of the common *Indio/Chino* experience in New Spain. Asian immigrants were incorporated into indigenous society often at a much lower station, ranging from slave and estate laborers to urban merchants. Ed Slack Jr.'s research into Asian communities in Mexico in the sixteenth and seventeenth century reveals as much.

Indios/Chinos were used to construct the fortifications at Acapulco (the *Fuerte de San Diego*) and were present at many landed estates as agricultural laborers. Slack notes one example in

⁶⁰⁵ Mercene, 89.

⁶⁰⁶ Miguel del Barco, *The Natural History of Baja California* (Los Angeles: Dawson's Book Shop, 1980).

⁶⁰⁷ Mercene, 90.

⁶⁰⁸ Mercene, 90.

particular wherein a hacienda in Coyuca was sold in 1642 and its assets were recorded to include five *Chino* slaves and “forty clay jars which held tuba [wine].”⁶⁰⁹

The project of tracing *Indio* experiences in the Americas is a difficult but important one. Specifically, this study has focused only upon the presence of *Indios* at sea in the Pacific in the sixteenth and seventeenth centuries. Much more remains to be done to investigate the Asian diaspora community in Mexico and the viceroyalty of Peru in the early modern era.⁶¹⁰ As has been shown above, the greatest challenge for historians is in correctly identifying the ethnicities and points of origin of those labeled as “*Chinos*” in New Spain.

Conclusion

The numerous capacities in which *Indios* came to serve the Spanish imperial project in the Pacific basin is a subject deserving of a great deal more scholarly attention. For the purposes of this study, it is enough to recognize that the indigenous population of the Philippines served vitally important roles at sea both in Asian waters as well as aboard the Manila galleons crossing the Pacific. The presence of *Indios* together with various other Southeast and East Asian ethnicities pervaded both the vessels and the ports of the Spanish Pacific. To date, no world historian has taken a more direct and comprehensive analysis of Asian participation in the galleon trade than Edward Slack Jr., who traces the experiences of *Chinos* in New Spain for the duration of the galleon trade. Slack’s attempt to resurrect the history of 40,000 to 100,000 Asian immigrants who arrived in the New World between 1565 and 1815 leads him to communities of

⁶⁰⁹ Slack, 41.

⁶¹⁰ Ruddy P. Guevarra’s anthropological examination of modern day Acapulco is one means of examining *Indios* in the Americas. Ed Slack’s archival research at the archives of Mexico City is another.

former galleon crewmen (and slaves?) as far afield as Acapulco, Mexico City, Vera Cruz, and Baja California.⁶¹¹ As we have seen, while some of these *Indios/Chinos* abandoned the galleon trade system altogether—such as the seventy Asian crewmen of the *Espiritu Santo* who fled from service in 1618—many others put down roots in New Spain and took up jobs in support of the galleon trade and Pacific commerce. There was of course Gaspar Molina who took to shipbuilding for the Jesuits in New Spain. There were also *Indios/Chinos* who labored in the smaller shipyards of Acapulco just as their brothers did at Cavite.⁶¹² Asian labor helped to construct the harbor fortifications at Acapulco in 1615 – 1617, to transport imported galleon merchandize overland to Mexico City and to Vera Cruz, and to maintain and operate numerous haciendas throughout New Spain.⁶¹³ However, as Slack notes from his own research in the National Archives of Mexico, *Indios/Chinos* in the New World took part in colonial commerce as well, setting themselves up in Mexico City as “harp players, dancers, scribes, tailors, cobblers, butchers, silversmiths, embroiderers, and coachmen.”⁶¹⁴ Added to the this list were also *Indios/Chinos* who took to selling the vary wears that came to New Spain aboard the Manila galleons, peddling silk textiles as merchants in the *Parián* of Mexico City. Identifying who these Asian immigrants were is exceedingly difficult. The government of New Spain did not readily differentiate between the various Asian ethnicities—in most cases, an *Indio* from the Philippines was simply given the label *Chino* along with the rest of the Asian-American community in Mexico.

⁶¹¹ Slack, 37.

⁶¹² Slack, 40.

⁶¹³ Slack, 40 – 42.

⁶¹⁴ Slack, 42.

Port centers in the early modern world were not just centers of trans-regional economic exchange, but equally of global cross-cultural and biological exchange.⁶¹⁵ Manila and Acapulco should be viewed as emerging entrepôts in the developing early modern global exchange network and it should be recognized their commercial power inspired the long-distance exchanges of peoples, plants, and trade goods. Viewed in this light the Manila-Acapulco galleon trade becomes much more than simply an exchange of silver for silk but an extension of the lively multi-cultural and biologic exchanges taking place in the Atlantic. To date, world historians have thoroughly addressed the economic aspects of the galleon trade and Spanish Manila's place in the larger arena of global commerce. However, by asking new questions of the Manila galleons, such as how the trade was maintained and who participated (willingly or unwillingly) in trans-Pacific navigation, we can open new dimensions to the study of the galleon trade and make new connections to world historical fields of research.

Creating and depending upon multi-cultural trans-regional points of exchange was the only way in which the galleon trade could have been founded and continued to operate. The attempts at forging direct links from Seville and again from the New World had failed prior to 1565 because of a lack of the diverse human and material resources required to operate such a long trade link in the Pacific. But with an emerging base in the harbor of Manila, Spain's imperial mission in the Pacific was given new life, with laborers, sailors, rice harvests, building materials, and so much else that fueled trans-Pacific navigation.

⁶¹⁵ Broeze; Curtin, *Cross-Cultural Trade*; Lockard.

CONCLUSION

The Galleon Trade in World History

It should now be apparent that the Acapulco-Manila galleon trade is situated at the intersection of many historiographical traditions and discrete fields of research. The only means by which all the fields involved—namely maritime history, Spanish imperial history, labor history, environmental history, early colonial Philippine history, Southeast Asian history—can be intelligibly integrated into a single narrative or analytical framework is to adopt a world historical point-of-view. This study has already underscored the fact that world historians have done well to recognize the galleon trade's importance in world history, but almost exclusively from a perspective of trade and from within a context of European and Chinese economic interaction. This study has been an attempt to ameliorate this lopsided and incomplete treatment of the galleon trade. By asking how the galleon trade was forged and maintained in the first place—rather than leaping to an examination of the trade's role in transporting silver and silks—I have attempted to open new dimensions and approaches to the study of Spain's trans-Pacific seafaring, namely by taking the time to assess and to appreciate the role of Southeast Asia in the creation and maintenance of the galleon trade. Chinese merchant communities and trade networks were certainly major elements of the Southeast Asian maritime economy and in the success of the galleon trade. However, an evenhanded history of the Acapulco-Manila trade should not disregard Southeast Asia and the Philippines as peripheral elements or as mere

settings for a larger (read, “more important”) commercial interaction between mainland Asia and Europe (via New Spain). Looking beyond the exchange of silver and silks we see vital contributing elements in Philippine timber and labor (among much else), without which the trans-Pacific trade would not have been possible.

William L. Schurz was the first historian to attempt a systematic study of the galleon trade. However, Spain’s Pacific commerce in the sixteenth and seventeenth century was only fully brought to the attention of world historians in the 1990s by Dennis O. Flynn and Arturo Giráldez. Their numerous publications, all of which feature a silver-oriented analysis of the galleon trade, have largely shaped the general perception of the Manila-Acapulco trade amongst world historians. Not altogether incorrectly, Flynn and Giráldez have argued that the overarching importance and function of Spain’s trade at Manila is to be found in the exchange of silver for silks.⁶¹⁶ This singular exchange is actually an abridged assessment of a rather complex and significant commercial interaction. To be sure, one of the many immediate consequences of the forging of the trans-Pacific trade route, which connected Spanish America directly to the markets of Asia, was that Manila developed into a center of global trade in relatively short order. It did so by brokering much more than New World silver and Chinese silks. As early as the 1580s the port city had become a veritable clearinghouse for goods (and people) from all over East and Southeast Asia. Spices, porcelains, gunpowder, rice, exotic birds, silks, coconuts, and gold ornaments converged on Manila Bay, as did Spanish, Malay, Japanese, and Chinese

⁶¹⁶ Dennis O. Flynn and Arturo Giraldez have both argued strongly that 1571 and the opening of Manila mark globalization’s inception. Similar claims have been made earlier, if not as forcefully, by J. J. TePaske, C. R. Boxer, and many others. See Flynn and Giráldez, “Born with a ‘Silver Spoon’”; Flynn and Giraldez, “Cycles of Silver”; Flynn and Giraldez, “Born Again: Globalizations Sixteenth Century Origins”; Flynn and Giraldez, “Globalization Began in 1571”; TePasky, “New World Silver”; Boxer, *The Portuguese Seaborne Empire*, 17.

merchants.⁶¹⁷ During the early seventeenth century, as many as thirty to forty Chinese junks arrived annually at Manila to trade.⁶¹⁸ The lure of the profits to be made in the Asian trade brought the attention of rivals, such as the Portuguese and Dutch, both of whom were eager to lay claim to such key sites as the Spice Islands, the straits of Malacca, and Spanish Manila. Global trade thus brought about global war.

Though the exact figures are impossible to calculate, it is likely that Spaniards unloaded as much as 2,000,000 pesos (51.12 tons) of silver at Manila annually during the peak of the trade in the late sixteenth century and early seventeenth century.⁶¹⁹ Such numbers have led many world historians—Flynn and Giraldez especially—to view silver as a commodity of upmost importance to the early modern world economy. For Andre Gunder Frank, silver was a catalyst for the formation of a global economic network, and “silver money was the blood that flowed through its circulatory system and oiled the wheels of production and exchange.”⁶²⁰ In short, “Money went around [the world] and made the world go round.”⁶²¹ Viewed in this light, the galleon trade is most accurately viewed as being the key link in the global silver exchange that connected the rich mines of the Americas to the silver-hungry markets of East Asia.

But academic works that focus on the broader picture of trade, silver, and the global economic significance of Manila in the early modern period leave many aspects of Spain’s

⁶¹⁷ de Morga, *Sucesos de las Islas Filipinas*, 305-306.

⁶¹⁸ de Morga, *Sucesos de las Islas Filipinas*, 305.

⁶¹⁹ Flynn and Giraldez, “Arbitrage, China, and World Trade in the Early Modern Period,” 429-448. Flynn and Giraldez cite Han-sheng Ch’üan’s estimates for the period 1598-1699. See Han-sheng Ch’üan “The Inflow of American Silver into China from the Late Ming to the Mid-Ch’ing Period,” 79. Some documents from the period indicate years of much higher silver traffic. For example, the *Cabildo* of Mexico City reported an outflow of 5,000,000 pesos (127.8 tons) of silver to Manila in the year 1602 alone. In 1597, a unique year, the shipments of silver over the Pacific spiked to 12 million pesos. Wolf, 154.

⁶²⁰ Frank, 132.

⁶²¹ Frank, 131.

presence in the Philippines unexamined or underrepresented. Histories of the galleon trade must not allow the silk-for-silver trade to command too much attention, important though it was to the development of the global economy. With this in mind, my dissertation has posed a much more fundamental and essential question that considers much more than commerce—that is, what made the galleon trade possible? Asking such a question necessarily leads us away from silver and towards the many other topics connected to Spain’s Pacific operations. By focusing on the initial creation of the galleon trade, the challenges that were overcome in reaching the Philippines, and the array of vital resources available in the Philippines that sustained the Spanish colony and its Pacific connection, the galleon trade itself can be reoriented to better highlight issues of labor, conquest, diaspora, biological exchange, environmental resources, and so much else.

This study of Spanish seafaring in the Asia-Pacific region is but one example from a broader pattern of European voyaging in the early modern era. From the sixteenth century well into the nineteenth century all the major European maritime powers, not just the Spanish, drew upon Asian labor to maintain their fleets in the remote waters of East, South, and Southeast Asia. The problem of how to maintain a colonial foothold and strong military presence in the distant East Indies was not Spain’s problem alone. The British, for example, relied upon the shipyards at Bombay, Surat, and along the Masulapatam coast to maintain their maritime presence in South Asia starting in the eighteenth century. As early as 1600, Indian shipyards were producing 600-ton vessels for European mariners.⁶²² Like the Philippines, India had a large pool of skilled labor with a long heritage of seafaring and ship construction. And Indian-made ships, like those in the Philippines, proved to be more durable and far cheaper than their European-made

⁶²² Pacey, 67, 127. After 1790, ships built in India for European customers could exceed 1,000 tons.

counterparts.⁶²³ The dependent and exploitative relationships outlined in this study extended beyond the Spanish and Portuguese and in fact applied to all European maritime operations in Asia up to the late eighteenth century, if not even later.

This interpretation of European seafaring in Asia, wherein Europeans come to depend upon Asian resources, fits into a more general emerging trend in world history scholarship that views Asian economic development as a significant force. This displaces the old notion of a “Vasco da Gama Epoch,” a period in which Asia was suddenly and completely subjugated from the 1490s to the 1940s.⁶²⁴ Summarizing this emerging trend in world history in 1989, Frank Broeze wrote that,

It is now clear that, if one adopts the really long-term perspective—spanning, say, the last two millennia—Asia and not Europe is the leading maritime continent in the world. It is incontestable that coastal and regional seafaring originated independently in several distinct regional sub-systems such as the Gulf, the bay of Bengal, the Malay world, and the seas of East Asia... Whether one uses Curtin’s paradigm of trade diasporas, considers the peopling of Madagascar or the Swahili coast, or analyses the dynamic spread of Islam, all approaches lead to the realization that Asia was the cradle of maritime enterprise, which by the time of the arrival in Asian waters of European explorers, traders and ‘pirates’ had evolved in a remarkably dense, elaborate and sophisticated network of seaborne interactions.⁶²⁵

This Asian-centric (not necessarily Sino-centric) argument has only been strengthened since the publication of works by Andre Gunder Frank, Robert B. Marks, and a host of other world historians who have become ever more conscious of Asia’s dynamic place history.⁶²⁶ It is within this context that I propose that the success of the Acapulco-Manila galleon trade owes more the robust Asian seafaring tradition and the development of a new hybridized shipbuilding tradition

⁶²³ Pacey, 67-68.

⁶²⁴ Broeze, 6. This doctrine was promoted by K. M Panikkar. See Panikkar, *Asia and Western Dominance: A Survey of the Vasco Da Gama Epoch of Asian History, 1498 - 1945* (London: George Allen & Unwin Ltd., 1959).

⁶²⁵ Broeze, 8.

⁶²⁶ Frank; Marks; Pomeranz; Reid, *Southeast Asia in the Age of Commerce*; Wong.

at Manila than it does to the perseverance and determination of Spain's men of the sea—though both should be considered an integral.

The history of the early Spanish Philippines and of the trans-Pacific commerce between Manila and Acapulco can only be truly explained within the context of Southeast Asia's rise as a major hub of commercial exchange. In this sense we are touching on the works of Anthony Reid and Victor Lieberman, who have toiled to show how in the fifteenth century Southeast Asia “emerged as a primary rather than a peripheral region in the Indian Ocean trade network.”⁶²⁷ As stated earlier, world historians and Asian specialists have done well to bring attention to the economic development of Asia in the early modern period, but more often than not, such studies frame Southeast Asia as a region subsumed by Chinese and Indian economies. Indeed, in looking to the Spanish experience at Manila, the large Chinese merchant diaspora community dominated the commerce of Manila and provided a great deal of the capital resources that fueled the Pacific trade. Considering the vital function played by the sizable Chinese merchant community at Manila, Spain's Pacific enterprise seems to have reaped the benefits of a greater Southeast Asian trading system rather than having drawn strictly from a Philippine resource base.

But this is not to say the Philippines were of no particular importance; the Acapulco-Manila galleon trade was clearly dependent upon the exploitation of the native inhabitants of the Philippines. The Spaniards' need for native labor at Manila was compounded by the fact that there was a dearth of supply bases and outposts in the Pacific. With no way to segment the long and arduous crossing between Asia and the Americas, Manila and Acapulco became the only

⁶²⁷ Kenneth R. Hall, “Revisionist Study of Cross-Cultural Commercial Competition on the Vietnam Coastline in the Fourteenth and Fifteenth Centuries and Its Wider Implications,” *Journal of World History* 24 (2014): 74.

points for resupply, thus putting a tremendous burden on the Philippines and its inhabitants.⁶²⁸

Additionally, because Spain had no other major territorial holding in the East Indies aside from the Philippines, the archipelago became the de facto center of Spain's entire East Indies enterprise. Other European powers were able to spread themselves between dozens of ports along the coasts of Africa, India, Southeast Asia and China. Therefore, at every stage of Spain's Pacific operations *Indios* were intimately involved: they were vital in the construction and maintenance of Spain's Pacific fleet, in navigating the treacherous trans-Pacific trade route, in defending Spain's interests from Dutch attack, and in manning the many galleon voyages made between Manila and Acapulco. By recognizing the central importance of indigenous labor to Europe's (not just Spain's) Asian maritime operations, one is able to add so much more depth to the standard narrative of commercial exchange.

In many respects the Asian economy absorbed Europeans, not the other way around. As has been thoroughly illustrated above, the success and longevity of the Manila galleon trade was built upon Asian labor, Asian materials, and Asian expertise. What is more, the trans-Pacific trade itself was built around the trafficking of Asian goods, such as silks, porcelains, and spices. That Spain's "Manila galleons" were frequently identified as "*Naos de China*" amongst the merchant communities of New Spain is indicative of the powerful influence Asian commerce and Asian trade goods had upon distant European colonial markets. (Similarly, the road linking Mexico City to the Pacific coast ports were casually termed *el camino de China*, or the "the China road.")⁶²⁹ Here then, in both a symbolic and literal way, the Asian economy was making inroads

⁶²⁸ The Island of Guam was frequently used as a stopping point for the westbound Manila Galleons. The longer eastbound route however was devoid of such outposts.

⁶²⁹ Fernando Benitez, *La Nao de China* (Mexico City: Cal y Arena, 1989).

into the Western hemisphere and Spain's empire. This is also evidenced in the emergence of Asian diaspora communities in the New World. These conclusions raise many important world historical questions regarding the trans-Pacific trade of the sixteenth and seventeenth century. Was the Acapulco-Manila galleon trade an extension of a European world-economy or an Asian world-economy? To date, only a small handful of scholarly articles have taken on such questions and sought to reassess the Manila galleon trade within a framework other than commercial exchange.⁶³⁰ A further examination of colonial labor in the Philippines is required, so too are investigations that look into the communities of Asians in the New World along the lines of Ed Slack Jr.'s research.

However, one must not simply replace Euro-centrism with Sino-centrism or Asian-centrism as this misses the larger point of a genuine world historical analysis.⁶³¹ I would go as far as to say that arguing for a centrist approach necessarily distorts the history of trans-regional exchanges and interactions as well as the vital contributions made by "peripheral" actors, such as happened with the Manila Galleon trade.⁶³² As we have seen, much of the success of the galleon trade was built upon the human and material resources of Southeast Asia. But this is not the entire picture. To fully understand the Manila Galleon trade one must view it not as being either an Asian-driven or European-driven enterprise, but rather a coming together of unique resources

⁶³⁰ In the *Journal of World History*, see the articles of Bjork, Slack, and Tremml for works on the galleon trade specifically. The Manila-Acapulco galleon trade also fits well into the broader theme of cross-cultural analysis and globalization championed by Jerry H. Bentley and the *Journal of World History*. See, for example, Jerry H. Bentley, "Hemispheric Integration, 500 – 1500 C.E." *Journal of World History* 9 (1998): 237 – 254; Bentley, "Seas and Ocean Basins as Frameworks of Historical Analysis." *Geographical Review* 89 (1999): 215 – 225; Bentley, "Cross-Cultural Interaction and Periodization in World History." *American Historical Review* 101 (1996): 749 – 770.

⁶³¹ Weiwei Zhang, "The World From China," in *A Companion to World History*, ed., Douglas Northrop (New York: Blackwell Publishing, 2012), 405 – 417.

⁶³² Zhang.

and ambitions. Here then it is not Spaniards arriving from the New World, or Chinese traders arriving from mainland Asia that held sway over Manila and the galleon trade, but rather the mixture of all the actors working together in the colony that made the trade possible. Ideally, historians can counterbalance either a Sino-centric or Euro-centric view of world history with a more evenhanded (and ultimately more accurate) view of the uniqueness of local interactions. While it is true that Spaniards possessed the reserves of initiative and fortitude required to cross the Pacific and engage in a protracted struggle to forge a colony on the far side of the globe, it is also true that without Chinese and Southeast Asian commercial networks, merchants, and luxury goods, the Pacific trade would have been without purpose and without a means to sustain itself. But there is a third viewpoint to consider, that of the local within the global.

Local actors, local laborers, mariners, and shipbuilders who converged on Manila and Cavite played just as vital a role in making the entire galleon enterprise feasible as did the abstract units of “Asia,” “Spain,” or “Europe.” Writing on this very issue, Weiwei Zhang notes that, “only colonial producers...could provide Europeans with the needed silver, gold and other products to buy or exchange luxury goods in the East.” And at an even more fundamental level, “labor, that is, workers, farmers or slaves, built the base for daily life and hence should not be marginalized or peripheralized in global history.”⁶³³ My study of colonial labor in Manila helps to bring the Philippines out of the shadows of the galleon trade history, which even today is overwhelmingly focused on China and New Spain as central actors. The Philippines was not simply the accidental site of a global exchange; rather, *the global exchange of the Pacific galleon trade was built from the ground up in the Philippines* deliberately. In every respect the Philippines then deserve to be considered as a significant (equal?) player in early modern global

⁶³³ Zhang, 412.

maritime trade. In as few words as possible, this study has been an attempt to bring the subjugated peoples of the Spanish Philippines—the *Indio* laborers, shipwrights, sailors, pilots, and farmers—up to their rightful status as active participants in one of the world’s first global trade routes. When William L. Schurz published his study, *The Manila Galleons*, he divided the work into sections based upon the major actors involved. There was a chapter each for the Spanish, Chinese, Japanese, and Portuguese. Meanwhile, the inhabitants of the Philippines became lost in the shuffle.

A NOTE ON SOURCES

This study draws from a number of sources, ranging from voyaging accounts and private correspondence to government records and reports. When possible I have utilized sources directly from the actors involved in the galleon trade and from participants in the colonization of Manila during the sixteenth and seventeenth century. Admittedly, a balanced source-based history of the galleon trade with Spanish accounts on the one hand and *Indio* accounts on the other is all but impossible. The available Spanish source material (largely from state archives) is voluminous. However, the written records of *Indio* actors from the early modern period are essentially non-existent. This is not to say that historians are helpless to access *Indio* experiences and to hear *Indio* voices. Historians must work through the Spanish sources as best they can to get at the experiences of the subjugated. William Henry Scott has shown that there are indeed “cracks in the parchment curtain” and that hidden underneath Spanish texts is a rich—if difficult to interpret—*Indio* account of the conquest.⁶³⁴ I make no claim otherwise that my own dissertation is limited in its source base. To be sure, there remains a great deal to be done in examining the colonization of the Philippines and the operation of the galleon trade through, say, Chinese, Japanese, and various Southeast Asian Muslim texts. Executing such a study would be far beyond my own faculties. To date, no such comprehensive analysis of all the available sources in all languages has even been attempted in regards to the Manila galleon trade.

This dissertation, like many other studies of the early colonial Philippines, relies largely upon Spanish accounts and texts. A number of works have proven invaluable to me and many others who work in this field. Emma Helen Blair and James Alexander Robertson’s fifty-five-volume document collection,

⁶³⁴ Scott, *Cracks in the Parchment Curtain*.

The Philippine Islands, 1943-1898, appears throughout the footnotes of this study.⁶³⁵ Blair and Robertson's work is present in most works of contemporary scholarship on the Spanish Philippines, being the most comprehensive, ranging, and widely available collection of translated documents on the Spanish colonial Philippines. There are weaknesses inherent in this collection however. Blair and Robertson took liberties in selecting what documents to include and omit, and some of those that were included in the collection were edited for length. Nevertheless, scholars still rely upon Blair and Robertson as a starting point of research and as a common pool of information.

There are a number of other document collections cited throughout this study, each of which share Blair and Robertson's accessibility but also the subjectivity of translation and editorial selection. *The Colonization and Conquest of the Philippines by Spain: Some Contemporary Source Documents, 1559-1577*, compiled by the Filipiniana Book Guild in 1965 is one such collection and Virginia Benitez Licuanan and José Llavador Mira's *The Philippines Under Spain: A Compilation and Translation of Original Documents* is another.⁶³⁶ Lastly, there is also Gregorio Zaide's eleven-volume *Documentary Sources of Philippine History*.⁶³⁷ Taken together, these collections provide a handy starting foundation from which to begin research but hardly offer a complete picture of the past. I have also utilized foreign language document collections that offer material not readily available in English. Perhaps the second most cited document collection found in recent works on the colonial Philippines (behind only Blair and Robertson) is Martín Fernández Navarrete's *Colección de los Viajes y descubrimientos que*

⁶³⁵ Blair and Robertson.

⁶³⁶ Filipiniana Book Guild, 1965; Licuanan and Llavador, 1990.

⁶³⁷ Zaide, 1990.

*hicieron por mar los españoles desde fines del siglo.*⁶³⁸ Compiled in the early nineteenth century using archival documents from Seville and Madrid, Navarrete's collection concerns the early voyages to the Philippines, beginning with Magellan's famous 1519 expedition. Navarrete was particularly useful for this study as his documents omitted no details when it came to crew manifests, shipbuilding costs, items purchased, and so forth. There is also the Portuguese collection by A. B. de Bragança Pereira, *Arquivo Português Oriental*.⁶³⁹ I used only brief references to this eleven-volume set when comparing Spanish experiences at sea in the Philippines with the experiences of Portuguese mariners elsewhere in Southeast Asia.

There are also more narrowly focused collections of primary source documents as well as more lengthy standalone texts that have proven equally as useful to this study. When discussing early efforts made towards shipbuilding along the Pacific coast of New Spain I found Cortes' letters to King Charles V particularly helpful.⁶⁴⁰ There are also the widely available texts of Bartolomé de las Casas and Bernal Díaz de Castillo, both of whom offer valuable glimpses into the early failures of trans-Pacific navigation from the New World.⁶⁴¹ Looking to similar writings from the early colonial Philippines we find a number of lengthy reports that stand on their own as sources worth noting. First and foremost is Antonio de Morga's history of the early colonial Philippines, *Sucesos de las Islas Filipinas*.⁶⁴² De Morga offers extensive descriptions of indigenous life, boatbuilding techniques, patterns of commercial interaction, and much else of value that he witnessed during his time in the archipelago in the last years of the sixteenth

⁶³⁸ Navarrete's five-volume set was published between 1825 and 1837.

⁶³⁹ I used the updated edition of Pereira document collection, published between 1936 – 1940.

⁶⁴⁰ I accessed these letters both through Francis Augustus McNutt's two-volume translation of 1919 as well as through Anthony Pagden's 1971 translation.

⁶⁴¹ Las Casas, *In Defense of the Indians*; las Casas, *Historia de las Indias*; de Castillo, *Historia verdadera de la conquista de la Nueva España*.

⁶⁴² De Morga's account is widely available. It appears in Blair and Robertson as well as a single translated volume by J. S. Cummins.

century. Alongside de Morga is the expansive history of the Philippines written by Bartolome Leonardo de Argensola, published in 1706.⁶⁴³ Argensola's account is particularly useful for his testimony regarding the Spanish-*Moro* wars in the seventeenth century. Also of note is Sebastián de Pineda's richly detailed report on shipbuilding in the Philippines in the early seventeenth century, which appears in numerous document collections (including Blair and Robertson). The content of de Pineda's report of 1619 is of central importance to this study and I therefore referenced the original document through the digitized *Archivo General de Indias* at Seville via the *Portal de Archivos Españoles* (PARES).⁶⁴⁴

The last major category of source material used in this dissertation comes from voyaging accounts made by those who sailed to and/or from the Philippines in the sixteenth and seventeenth centuries. These sources are not strictly limited to Spanish accounts. Indeed, there are many English texts regarding the capture of Manila galleons on several occasions. There is of course George Anson's account of his encounter with a galleon in the eighteenth century, *The Manila Galleons: Being a Chapter from A Voyage Round the World*.⁶⁴⁵ Such accounts from non-Spanish sources offer new insights into life onboard a galleon, the composition of the crew, the durability of the vessels and other such elements that Spanish voyagers may have been reluctant or too disinterested to include in their own accounts. Along with Anson's account I have also gained valuable insights from William Dampier's *A New Voyage Round the World*, Guillaume Joseph Hyacinthe Jean Baptiste Le Gentil de la Galaisière *A Voyage to the Indian Seas*, Antonio

⁶⁴³ The full title of Argensola's work is *The Discovery and Conquest of the Molucco and Philippine Islands: Containing their History, Ancient and Modern, Natural and Political: their Description, Product, Religion, Government, Laws, Languages, Customs, Manners, Habits, Shape, and Inclinations of the Natives*, published London, 1706.

⁶⁴⁴ <http://pares.mcu.es/>

⁶⁴⁵ For Anson's *Voyage*, I have relied upon the 1940 edition published by The Book Club of California.

Pigafetta's voyaging account from Magellan's expedition, as well as Ione Stuessy Wright's translation of the voyaging documents from Álvaro de Saavedra Cerón's voyage of 1527-1529.⁶⁴⁶

⁶⁴⁶ Dampier, London: 1697; Galaisière, Filipiniana Book Guild, 1964; Pigafetta's account, translated by Lord Stanley of Alderley, London: 1874; Wright, 1951.

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