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INTRODUCTION

Across Three Oceans

The reach of empire in the early modern period was spurred on by the expansion of desires and ambitions to spread the reach of the Spanish Hapsburg court and the embrace of the Catholic church. Ships carried captains, clerics, merchants, servants and slaves along coastal currents and eventually across vast distances on oceanic gyres that swirl and connect the globe, slowing only at the shores of continents. The maritime expansion of empire connected Europe to the rest of the world. First the Portuguese south along the African cape, then south and around into the open field of the Indian Ocean into an already well established system of trade and cultural interaction established largely by Islamic and Asian outward expansion.² The Spanish sailed west at first in a timorous survey that quickly turned into a dauntless battery of the newly discovered Caribe islands before landing on continental shores and claiming them as New Spain. As ships connected Europe to New Spain they also connected New Spain, West Indies, and Terre Firme (what is now Mexico, the Caribbean, and Peru, respectively) to Europe³; the Fleet of New Spain and Terre Firme integrated with the eastward fleet from Asia through the Manila Galleons and extended the circuit across the Pacific by connection at Acapulco on the western coast of New Spain.⁴ The world,

¹ Translations of quotations from Spanish and German into English were made by the author.

² Janet L. Abu-Lughod, *Before European Hegemony: The World System A.D. 1250-1350* (New York: Oxford University Press, 1989); C. R. Boxer, *The Portuguese Seaborne Empire, 1415-1825*, 1st American ed., *The History of Human Society* (New York: A. A. Knopf, 1969).

³ Parry, *The Spanish Seaborne Empire*.

⁴ Schurz, *The Manila Galleon*.

once defined by continents and terrestrial geographies of overland routes and waypoints, was now one large oceanic system; one large body of water with three main embayments connected by ships and intrepid ambition across the Indian, Pacific, and Atlantic oceans. This global trans-oceanic system is in no way fixed or static though certain ports, cities, and centers persist through many centuries.

HISTORIOGRAPHY AND METHOD

As a methodological approach, the use of the “analytical construct and explicit category”⁵ known as Atlantic history has helped define specific approaches to organize the study of events and developments in the early modern era. The Atlantic basin model provides a site for analyzing how “economic, social, cultural, and other forms of exchange among and within the four continents surrounding the Atlantic Ocean—Europe, Africa, South America, and North America...” functioned within a geographic framework.⁶ Although there are limits to this approach, it does serve as a way to view how changes in one locale had effects on distant ones through the movement of people and ideas. This “one basin” model has historical origins⁷ although new methodologies have developed in order to include large and complex events (slavery being the one that comes to mind). Despite the benefits of this model its limit is reached by definition: the Atlantic basin is not an isolated system, it is connected at multiple junctures with other channels, straits, and inlets to the rest of the world’s oceans. By connecting and expanding the ocean basin model to include the Atlantic, Pacific, and Indian oceans, the

⁵ Jack P. Greene and Philip D. Morgan, eds., *Atlantic History: A Critical Appraisal*, Reinterpreting History (Oxford: New York ; Oxford University Press, 2009), 3.

⁶ Ibid.

⁷ Fernand Braudel, *The Mediterranean and the Mediterranean World in the Age of Philip II* (Berkeley, Calif: University of California Press, 1995).

flow of objects can be seen at a global level.⁸ The repercussions of the movement of peoples and ideas can be tracked to multiple sites so that connections become available for inspection and analysis. Amongst other things, the early modern era marks the expansion and movement of people and ideas across the globe simultaneous with the movement of people and ideas back to sites of initial departure, and then back out again. A global ocean model as a methodology and a metaphor allows the events of the local to be viewed against the backdrop of the global, and the global flows of people, ideas, and materials to be observed at the local level.

As a response to other ocean based models, the “global ocean” model for writing a history “that can trace the path a of particular mobile entity”⁹ or “responses to mobility”¹⁰ also incorporates the agency of the local to effect global flows. A single-ocean model provides a backdrop against which to frame historical narratives apart from the nationalistic, imperial, or diplomatic and engage in a global approach that views ocean spaces as sets of boundaries and intersections; it is at the same time an analytical and metaphorical framework that accommodates conquest and assimilation as well as the exchange, translation, and hybridity of visual and material cultures.¹¹

In 1990 Mel Fisher and his crew of marine salvagers, marine archaeologists, and historians recovered a trove of artifacts from a wreck just off the western coast of Florida

⁸ K. N. Chaudhuri, *Asia before Europe: Economy and Civilisation of the Indian Ocean from the Rise of Islam to 1750* (Cambridge ; New York: Cambridge University Press, 1990), 30-37. Especially relevant here is Chaudhuri’s discussion of the comparative world views of Islam, India, South East Asia and China through the cartographic reframing of global points of reference. For each of the comparative categories, the map of the globe changes, sometimes in slight nuance, and at others quite radically.

⁹ Kären Wigen, "Cartographies of Connection: Ocean Maps as Metaphors for Interarea History," Jerry H. Bentley, et al, eds., *Interactions: Transregional Perspectives on World History, Perspectives on the Global Past* (Honolulu: University of Hawaii Press, 2005) 157-161.

¹⁰ Ibid.

¹¹ Ibid.

between the Marquesa Islands and the Dry Tortugas. The recovery of objects from the 1622 shipwreck of *Nuestra Señora de Atocha* and the *Santa Margarita* include very large amounts of jewels, gems, indigo, gold and silver artifacts as well as gold and silver ingots. Among these treasures of the Spanish Main are bezoar stones associated with a golden chalice-like vessel, fragments of Chinese pottery from the Jiajing period (ca. 1622-1666 CE), and two carved-ivory panels (Fig. 1). All of these are held in the collection of the Mel Fisher Maritime Museum in Key West, Florida along with other recovered objects including cannons, cannon balls, swords, anchors, crossbows, Spanish and Mexican ceramic ware, and numerous other goods.

In the summer of 2016 I traveled to Key West to document the carved-ivory panels recovered from the 1622 shipwreck. Although the shipwreck of the *Nuestra Señora de Atocha* and the *Santa Margarita* is well documented very few of the objects beyond the gold and silver from Mexico and Peru have been studied. The bulk of the jewels, gems, gold bullion, silver ingots and coinage, the ‘treasure’ of the shipwrecks, was sold in lots offered at auctions through Sotheby’s, Christie’s and Bonham’s. Excluded were the idiosyncratic objects whose worth is of value to scholars rather than treasure hunters and auctioneers. This paper discusses the ivory panels and argues through historical, material, and visual evidence that they are of Ceylonese origin and can be placed within the context of carved ivory objects exchanged by Portuguese and Spanish traders and brought to New Spain via the trans-Pacific Manila Galleon routes.

The ivory panel fragments are discolored and damaged from nearly four-hundred years of submersion in the Caribbean waters; they are no longer the creamy-white characteristic of ivory objects but a brown shade tinged with stained pools of algal green. Though damaged they are still legible with distinct vegetal designs, rectilinear borders,

symbolic and mythological animal figures enclosed in sprouting tendrils, and a centrally-placed heart pierced by crossed arrows. The pierced heart is the symbol of the monastic Order of Saint Augustine¹² and it along with a combination of South Asian Buddhist and Hindu iconography mark the carved-ivory panels as objects legible in multiple contexts of visual perception along networks of mobility that connect Asia to New Spain and New Spain to Europe.¹³ The pierced heart symbol has been characterized as “one of the most popular and widely disseminated elements in European iconography...” and it is often displayed along with the double-headed eagle of the Habsburg Empire.¹⁴ The Augustinian pierced heart motif situates the ivory panels within the network of Catholic monastic orders throughout the trans-Pacific and the trans-Atlantic and gives it mobility along its routes.

The material and visual properties of the ivory panels (Fig. 1 and 2) correspond to carved-ivory caskets and cabinets held in the Victoria and Albert Museum London; the Metropolitan Museum of Art in New York; the Museum of Fine Arts Boston; the Walters Art Museum in Baltimore, Maryland; the Kunsthistorisches Museum in Vienna; the Museum für Asiatische Kunst in the Staatliche Museen zu Berlin; in the Munich Residence museum; museum collections of Porto and Lisbon in Portugal; in Madrid; and in various international private collections. The published scholarship on Ceylonese ivory caskets and cabinets includes those by Jaffer, Jaffer and Schwabe, Alan Chong,

¹² Sargent, *At the Crossroads*, 55. The heart pierced with arrows symbolizes love and charity.

¹³ Serge Gruzinski, *The Mestizo Mind: The Intellectual Dynamics of Colonization and Globalization = La Pensée Métisse* (New York: Routledge, 2002)86. Serge Gruzinski ponders how the eye of the mestizo mind would interpret a pierced heart in terms of the history of human sacrifice in ancient Mexico.

¹⁴ Amelia Peck and Amy Elizabeth Bogansky, eds., *Interwoven Globe: The Worldwide Textile Trade, 1500-1800* (New York : New Haven: Metropolitan Museum of Art ; Distributed by Yale University Press, 2013), 50.

and perhaps the most important and comprehensive text by Jordan-Gschwend and Beltz that documents all of the known dozen¹⁵, or so carved ivory caskets and cabinets held in collections.

The ivory panels from the 1622 shipwreck may be the first documented from this category of caskets and cabinets recovered from a dated shipwreck. Although there are carved-ivory objects, whole or in fragments, recovered from shipwrecks, so far there are none known to match the size and shape that coincide to a box-like structure (approximate dimensions 8.5 x 3.5 inches, see Fig. 1 and 2). The visual and material qualities of the 1622 shipwreck ivory fragments are too close in dimension and design to elements of identified objects to dismiss them from belonging to a Ceylonese carved-ivory object and because of this I contend that they belong to the typology of objects from that context. In a broad chronological definition, the documented ivory caskets from Ceylon are dated from the mid-sixteenth century to the early seventeenth century¹⁶, and the cabinets from Ceylon are dated from the late sixteenth century to the late seventeenth century.¹⁷ By its *ante quem* date of 1622 alone, this positions the *Santa Margarita* ivory panels as belonging to either the casket or cabinet category. The cabinet can be further divided into two categories of writing boxes, and lock or jewelry boxes. A one-hundred to a one-hundred and fifty-year period is thus possible for dating

¹⁵ Amin Jaffer, *Luxury Goods from India: The Art of the Indian Cabinet-Maker* (London: New York: V & A ; Distributed by Harry N. Abrams, 2002), 14. Jaffer puts the number at approximately nine in his entry for the Robinson Casket held in the Victoria and Albert Museum; Annemarie Jordan-Gschwend and Johannes Beltz, *Elfenbeine Aus Ceylon: Luxusgüter Für Katharina von Habsburg (1507-1578)* (Zürich: Museum Rietberg, 2010). Jordan-Gschwend and Beltz include three more carved ivory box objects and include a fragment of a panel that may have been part of a similar set of objects, 19.

¹⁶ Ibid. Jordan-Gschwend classify the caskets, in German, as *Kästchen*

¹⁷ Ibid. Jordan-Gschwend differentiate the cabinets into two types as *Kabinettschrank* (cupboard but literally “cabinet cupboard”) and *Schreibkabinett* (writing cabinet). *Kabinettschrank* are box-like drawers usually with hinged doors used to store documents and various small valuable objects. *Schreibkabinett* are exact in appearance to *Kabinettschrank* but are typically designed to hold writing tools and supplies.

carved ivory panels from Ceylon held in collections either through Portuguese, Spanish, or Dutch networks of trade and cultural interchange.

The dating of ivory objects from the Manila Galleon trade route has recently been called into question through recoveries from dated shipwrecks that contained carved ivory figures similar in form and style to those held in the Victoria and Albert Museum. Objects from the Manila Galleon *Santa Margarita* shipwreck of 1601, off the coast of the Mariana Islands, demonstrate that the dating of some ivory objects from Asia held in Western collections has been approximate and that recovered items from dated shipwrecks can provide more accurate *terminus post quem* (earliest date before the object is created) and *ante quem* (latest date after which the object is created) dates for objects originating from sources with or without documented histories.¹⁸ In terms of this ambiguity of dating ivory objects from Asian sources held in Western collections, if the ivory panel fragments from the 1622 shipwreck are from a Ceylonese casket type then that places them very late in, and perhaps beyond, the estimated period for those objects, and if they are part of a cabinet type, then for those they come early in the period. Although prior scholarship has attributed the panels to Moorish Spain and attribution to the *Nuestra Señora de Atocha*¹⁹, in this paper I argue that, regardless of the type or period, the carved-ivory panels held in the Mel Fisher Maritime Museum recovered from the 1622 shipwreck are of Ceylonese design and origin, and moreover, my research in the museum's archive confirms that the ivory panels were recovered from the *Santa Margarita* and not the *Nuestra Señora de Atocha*.

¹⁸ Marjorie Trusted, "Survivors of a Shipwreck: Ivories from a Manila Galleon of 1601," *Hispanic Research Journal* 14, no. 5 (October 2013): 450-452.

¹⁹ Elena Phipps et al., *The Colonial Andes: Tapestries and Silverwork, 1530-1830* (New York : New Haven: Metropolitan Museum of Art ; Yale University Press, 2004), 202-203.

Nuestra Señora de Atocha

On September 6, 1622 twenty-eight ships left Havana, Cuba fully-laden with gold, silver, jewels, indigo, Campeche wood, and countless items and materials, all heading to catch the return tack through the Bahamas and across the Atlantic back to the port in Cádiz before landing in Seville; as well as goods the ships carried passengers along with the crew. In the early hours of that evening, a hurricane storm assaulted the fleet causing heavy damage, loss, and the wrecking of five ships. No ship escaped without damage, some lost their masts and all of their rigging, and others broke apart but stayed afloat.²⁰ Aboard one of the twenty-three remaining ships, the *Nuestra Señora del la Candelaria*, was Fray Antonio Vázquez de Espinosa, a Carmelite friar on his return to Spain after fourteen years of unsanctioned service to the Church and Crown in New Spain and Terre Firme.²¹ His account of the storm was published in 1623 and describes the immenseness of the storm and the terrors of surviving the aftermath of its destruction. In 1624 an account was published in translation in an English pamphlet in London based on a now lost Spanish printing that lists the 1,000 or so people who perished in the hurricane.²² Captains, colonels, mariners, ship-boys, servants, officers, soldiers, and passengers are listed among the drowned or missing for the galleons

²⁰ Oliver Dunn, "Trouble at Sea: The Return Voyage of the Fleet of New Spain and Honduras in 1622," *Terrae Incognitae* 11, no. 1 (January 1, 1979): 29–41, doi:10.1179/tin.1979.11.1.29.

²¹ Antonio Vázquez de Espinosa and Sara L. Lehman, *Tratado Verdadero Del Viaje Y Navegación*, Juan de La Cuesta Hispanic Monographs. Series Ediciones Críticas, no. 48 (Newark, Del: Juan de la Cuesta, 2008).

²² *A True Relation of That Which Lately Hapned to the Great Spanish Fleet, and Galeons of Terra Firma in America: With Many Strange Deliueries Ofcaptaines, and Souldiers in the Tempest, and Other Remarkable Accidents, Worthy the Obseruation. Also, a Catalogue of Those Persons of Account, Which Eyther Perished in This Tempest, or Were Miraculously Preserued. Faithfully Translated out of the Spanish Originall, as It Is Printed and Published in Madrid, Sevil, Lishbone, and Other Places*, 17th-18th Century Burney Collection Newspapers (London: Printed [by George Eld] for Nathaniel Butter, Nicholas Bourne, and William Sheffard, 1623).

Nuestra Señora de Atocha and the *Santa Margarita*; no account is given for the three other ships also lost that night. The loss of life and goods was a tragic event, as Fray Antonio describes it and the list of names attests, but for the Crown, the greatest loss was the treasures of gold, silver, and jewels aboard those ships.

MANILA, MEXICO, CHINA

The treasure was necessary to support Spain's ongoing war with its former empire in the Netherlands, supported by the Dutch, and its renewed conflict with the French over territory in Italy. Spain borrowed heavily to pay for its royal court, its wars, and for needed materials to continue its holdings at home and throughout its empire. Inflation, the overextension of credit to the government, and “the maintenance of royal authority at home and influence abroad, had all come to depend on a steady influx of [New Spanish] bullion.”²³ Any interruption in the flow of silver, gold, or sugar created havoc for bankers, investors, and the royal court adding to uncontrolled inflation, recession, and chaos in the markets.²⁴ “Epidemics of bankruptcies...” broke out in Seville whenever ships arrived late or not at all.²⁵ The unpredictable chaos of storms and the destruction of ships was an uncontrollable fact of trade between the Caribbean and Cádiz, Manila and Acapulco. Shipwrecks, either through error in navigation, structural failure of aged ships, or storms, were part and parcel and inseparable from the nature of the seagoing trade.

²³ J. H. Parry, *The Spanish Seaborne Empire*, 1st American ed., The History of Human Society (New York: Knopf, 1966), 246.

²⁴ *Ibid*, 247-248.

²⁵ Vázquez de Espinosa and Lehman, *Tratado Verdadero Del Viaje Y Navegación*, 50. "...la epidemia de las bancarrotas."

In combination with piracy on the open sea, harassment from French corsairs, and the additional pressures from English ships, the 1622 shipwreck of the *Atocha* and the *Santa Margarita* was among the many factors that led to the "failure that precipitated a disastrous chain of events that lead to the eventual fall of the Spanish Empire."²⁶ But this is only part of the tale because these same effects were also felt in Manila whenever a galleon arrived late or failed to arrive. Spain relied heavily on both of its Atlantic and Pacific networks of trade to manage its ever-increasing debt.²⁷

Manila was the focal point for trade between Chinese and other regional traders and the European and Muslim traders that brought goods along their respective networks. It was a central point of distribution for many trade goods and was the source of porcelain, silks and fabrics, and carved ivory goods were either made locally or brought from various points in Asia along the coast of the China Sea, India and Ceylon, and from throughout the archipelagos of South and Southeast Asia.²⁸ Chinese traders and craftsmen, Sangleys, brought goods for trade to Manila in exchange for Spanish silver from Mexico and Peru. They also established workshops in Manila and in Cavite Province just south of the city and manufactured goods with a "Chinese imprint."²⁹ Manila was both a site of production and the source of distribution for many goods made using Western motifs and meant for export. The Manila Galleons brought

²⁶ Ibid, 51.

²⁷ Schurz, *The Manila Galleon*, 18.

²⁸ William Lytle Schurz, *The Manila Galleon*, Dutton Paperback, D35 (E.P. Dutton, 1959) 291-326.

²⁹ Gustavo Curiel, "Perception of the Other and the Language of 'Chinese Mimicry' in the Decorative Arts of New Spain," Donna Pierce et al., eds., *Asia & Spanish America: Trans-Pacific Artistic and Cultural Exchange, 1500-1850: Papers from the 2006 Mayer Center Symposium at the Denver Art Museum*, Symposium Series / Mayer Center for Pre-Columbian and Spanish Colonial Art 2006 (Denver, Colo: Denver Art Museum, 2009), 26.

Japanese and Chinese porcelain to Mexico, some of which stayed there,³⁰ went to Spain aboard ships, or traveled southward to Peru.³¹ Evidence of the China-Manila-Mexico trade of Chinese porcelain is revealed in the recovery of objects from the wreck of the *San Felipe* which sank just off the coast of Baja California in 1576 (Fig 3).³² These were objects destined to Spain along their international trade routes but also for “Mexican homes” where Chinese porcelain was a prized object. Additionally, Chinese porcelain sherds from before 1644 have been recovered from archaeological excavations at the Palace of the Governors, in Santa Fe, New Mexico along with ivory chess pieces dating from 1610-1680 (Fig. 4).³³ Japanese lacquer boxes and a range of various types of Chinese porcelain sherds were recovered from archaeological sites in Mexico City dated from the late sixteenth century to the early seventeenth century.³⁴ It seems as though evidence for an international system, a global network, of connection between Asia and Europe through Mexico and Peru is abundantly available in these various examples of the transfer of visual and material culture.

AUGUSTINIANS IN ASIA, MEXICO, PERU

The ships of the Fleet of 1622 also carried “passengers from various regions within the Viceroyalty of Peru (Potosí, Cuzco, Arica, Callao, Bogotá).”³⁵ Fray Vazquez de Espinosa travelled throughout Mexico, and Peru according to his written account of the

³⁰ Kuwayama, George. "Chinese Porcelain in the Viceroyalty of Peru." *At the Crossroads: The Arts of Spanish America & Early Global Trade, 1492-1850: Papers from the 2010 Mayer Center Symposium at the Denver Art Museum*. Ed. Donna Pierce. Denver: Denver Art Museum, 2012. 165-74.

³¹ Ibid.

³² Ibid, Brown, 66.

³³ Pierce and Otsuka, *At the Crossroads*, 163.

³⁴ Rodriguez, *Asia & Spanish America*, 37-57.

³⁵ Phipps et al., *The Colonial Andes*, 208.

Atocha shipwreck and his *Compendio y Descripción de las Indias Occidentales*³⁶ which chronicles his experiences proselytizing to the indigenous communities throughout Mexico and Peru. The Catholic mission was a global one so one can imagine that Vázquez may have traveled along with other Catholic friars who were aboard the fleet of twenty-eight ships. Considering a set of silver nesting boxes recovered from the *Atocha* shipwreck site and its engraved design of a Pierced Heart symbol on the largest of these (Fig. 6) we can see that objects marked with the Augustinian symbol were aboard the ships. Several other objects recovered from the same site—an engraved cross, a spoon, and a stickpin for a garment—also have the Augustinian motif.³⁷ The ivory panels, as part of a container (either casket or cabinet), also marked with the Augustinian pierced heart, would have been in a familiar context among all of the other objects marked with the same motif that traveled through Asia, Mexico, Peru, and Europe.

Catholic friars and monks traveled aboard the ships to all the points where the Portuguese and Spanish ventured. In 1564, Miguel López de Legazpi and his navigator Andrés de Urdañeta, an Augustinian friar, set out under royal order to discover the eastward route to New Spain.³⁸ Urdañeta was among the first Catholic missionaries in the Philippines and was previously in service to the church in Mexico.³⁹ Augustinians established missions in Mexico, Peru, and the Philippines and expanded outward into all of Asia to convert souls for the church. In 1576, two Augustinian emissaries traveled to Fukien, China as representatives of King Philip II. The Augustinian presence in Asia,

³⁶ Antonio Vázquez de Espinosa and Balbino Velasco Bayón, *Compendio Y Descripción de Las Indias Occidentales*, Biblioteca de Autores Españoles, t. 231 (Madrid: Ediciones Atlas, 1969).

³⁷ Phipps et al., *The Colonial Andes*, 202.

³⁸ Brian Fahy and Veronica Walker Vadillo, “From Magellan to Urdaneta: The Early Spanish Exploration of the Pacific and the Establishment of the Manila Acapulco Galleon Trade,” 2016.

³⁹ Sargent, *At the Crossroads*, 55.

like the Dominican and Franciscan, is intrinsically tied to the Spanish and Portuguese presence in trade and exchange in Asia.

A claim for a China-Manila-Mexico connection via Augustinian imagery has also been made through scholarship that connects porcelain from Macau to specific church sites in Mexico. Using evidence recovered from the 1638 shipwreck of *Nuestra Señora de la Concepción* off the coast of Saipan in the Pacific a plausible connection to imagery on Chinese ceramic plates has been established to Augustinian architectural motifs found on existing objects in museum and private collections (Fig. 15). The *Nuestra Señora de la Concepción* was traveling from Manila to Acapulco when it struck a reef during a storm and sank distributing its load of goods from China, India, Cambodia, Borneo, Burma, Ceylon, and Siam. Camphor, cotton, ivory, and jewels were listed among items bound for Mexico.

MATERIALITY OF IVORY

Materials have a significance for those who transform them through craft and technique and also for those who use and behold the crafted objects. Symbolic properties of materials are often reflected through the use of the objects they are crafted from and provide them with meaning.⁴⁰ The symbolic meanings of ivory are as varied as the cultural contexts in which it is used but what unifies meaning through these contexts is ivory's uniqueness, scarcity and material value. No one symbolic meaning holds true

⁴⁰ Christina Nielsen, "Carving Life: The Meaning of Wood in Early Modern European Sculpture," Christy Anderson, et al, eds., *The Matter of Art: Materials, Practices, Cultural Logics, c. 1250-1750*, Studies in Design (Manchester: Manchester University Press, 2015), 231-239.

for ivory in any one context but it has been valuable across world cultures through millennia.^{41,42}

Ivory as a prized material can be traced across time through the many cultures that prized it from the “Inuit who carved mammoth tusk to the Indonesian and Malaysian archipelagos and most of the area in between.”⁴³ Horst Bredekamp even suggests inserting an additional prehistorical epoch into those named after materials: the Ivory Age should come just after the Stone Age to join the lineage that includes the Copper Age, the Bronze Age, and the Iron Age.⁴⁴ There are fragments of African elephant ivory in archaeological sites along the Iberian Atlantic coast datable through spectroscopic methods to 2500 BCE and in south-eastern Spain to an earliest date of 2000 BCE.⁴⁵ Sites of ivory production have been located in Ghana dated to the tenth-century, even though at that point elephant populations have begun to decrease and the ivory needed to be transported overland great distances to sites where the ivory was worked.⁴⁶ Climate change and human pressure have pushed African elephant

⁴¹ A.C. Valera, T.X. Schuhmacher, and A. Banerjee, “Ivory in the Chalcolithic Enclosure of Perdigoes (South Portugal): The Social Role of an Exotic Raw Material,” *World Archaeology* 47, no. 3 (May 27, 2015): 390–413. This article discusses the social role played by ivory and ivory articles in the Perdigoes enclosures (South Portugal) during the Chalcolithic (third millennium BC), in the context of the emergence and development of social complexity on the Iberian Peninsula.

⁴² Jan Van Campen, “Masters of the Knife: Chinese Carving in Wood, Ivory and Soapstone,” *The Rijksmuseum Bulletin*, 2011, 154. Van Campen notes how ivory, though valued, has no particular symbolic associations other than being ‘just’ an easily worked, attractive material in some historical Chinese court contexts. The particular meaning and associations of ivory as a material changed as the historical context changed.

⁴³ Martha Chaiklin, “Ivory in World History – Early Modern Trade in Context,” *History Compass* 8, no. 6 (June 1, 2010): 532.

⁴⁴ Horst Bredekamp, “Franz Kugler and the Concept of World Art History,” Peter N. Miller, ed., *Cultural Histories of the Material World*, The Bard Graduate Center Cultural Histories of the Material World (Ann Arbor: The University of Michigan Press, 2013).

⁴⁵ Thomas X. Schuhmacher, João Luís Cardoso, and Arun Banerjee, “Sourcing African Ivory in Chalcolithic Portugal,” *Antiquity* 83, no. 322 (December 2009): 992.

⁴⁶ Ann B. Stahl and Peter W. Stahl, “Ivory Production & Consumption in Ghana in the Early Second Millennium AD,” *Production et Consommation de L’ivoire Au Ghana Au Début Du Deuxième Millénaire Apr. J.C.* 78, no. 299 (2004): 99.

populations away from the Sahara and the West African coasts into central and eastern Africa but the trade in ivory has remained despite the displacement of its source.

In the tenth century CE, African ivory as a raw material for craftsmen in Europe and the Mediterranean became abundantly available through “a sophisticated international trade route”⁴⁷ that spanned the Indian Ocean coast from south of the Mozambique Channel northwards through the Red Sea and into the Mediterranean to southern European port cities.⁴⁸ The “Swahili Corridor”⁴⁹ was facilitated by Swahili traders of East Africa who exchanged goods with Muslim merchants at ports along the long coast. From these same ports on the East African coast came the ivory that was distributed eastward along Indian Ocean ports to India and into Asia. The connection between African ivory and the European and Asian continents predates antiquity and has been “part of global trading networks that sourced it from Africa, India, Thailand, the Malay Peninsula, and Ceylon.”⁵⁰ The desire for unworked and carved ivory rendered it a highly mobile material; its materiality defined its mobility in the early modern period as it moved over land and ocean in the interchange of material and visual culture.

Ivory’s color can range from dark brown, to pink, to bright and translucent white. Like wood it is cut and carved into varieties of shapes and sizes whose dimensions are limited only by the size of the tusk. The largest pieces of ivory come from African elephants whose massive tusks can provide board-like sections, flitches, up to eight inches wide and up to twenty inches in length. Like wood, tusks can be lumbered or sawn into raw shapes to suit the need of the carver either into large unworked sections

⁴⁷ Peter Barnet and Detroit Institute of Arts, eds., *Images in Ivory: Precious Objects of the Gothic Age* (Detroit, Mich.: Princeton, N.J: Detroit Institute of Arts ; Princeton University Press, 1997), 3.

⁴⁸ Mark Horton, “The Swahili Corridor,” *Scientific American* 257, no. 3 (September 1987): 89.

⁴⁹ Ibid.

⁵⁰ Chaiklin, “Ivory in World History – Early Modern Trade in Context,” 537.

or into many thin flitches to be used, for example, as panels for constructing boxes or creating veneers and inlay. Ivory is dense and easily carved without chipping or splintering and if stored properly can remain useful for a long time. It contains its own gelatinous substance from its central core that permeates it and gives its surface a high luster when polished. Unlike a tooth, an elephant tusk has no enamel but instead has an outer layer, like bark, called cementum, which has to be removed before the ivory can be worked. The inner layer is a mass of dentine material, what is known as ivory, and surrounds an inner pulp and nerve cavity that runs through its core nearly the length of the tusk. Because of the rarity and difficulty of obtaining elephant tusks, typically all of the tusk is used. Ivory's visual properties, its scarcity as a material, and its malleable character makes it open and available to receive meaning and to convey symbolic and material value.

MOBILITY

Mobility of Ivory

Through established routes of trade and exchange, African ivory was brought to India and then into Asia. Indian and Chinese ivory moved southward and westward into overland routes connecting to the Mediterranean and into coastal routes that connected the archipelagos in the transitional zones connecting the Indian Ocean to the Pacific Ocean. Ivory as a prized material was present in the royal courts of China who sourced it from elephant populations that dwindled away by the time the Europeans sailed into large trading ports in India. The plausibility that China was still a source of carved ivories from Zhangzhou, Fujian Province for import to Mexico from Manila via the

galleon trade has been posited.⁵¹ It is impossible to determine where the ivory for the panel fragments came from but we can place them into the available context for meaning in material, the global context of trade, and within the local context of symbolic meaning reflected in its use as an object.

The Portuguese reached the island of Ceylon at the height of their great expeditions in 1506, and concluded a first trade agreement with the King of Kotte, one of the four competing kings in the south-west of the island.⁵² Ceylon was already an important location for pre-Islamic Arab and Persian traders. It is known that the Sassanids maintained diplomatic relations with their inhabitants in the 5th century. Arab geographers mentioned the island of Sarandip, (from *Sinhaladvipa*, the island of the lions), on which Muslim merchants formed a strong presence until the 16th century.⁵³ African ivory is the possible source for the Ceylonese carved-objects since it was one of the materials circulated within the Portuguese network of trade centered around Goa and also with trade outposts in Pulicat.⁵⁴ If the ivory came from Ceylon it may have been pink in color, since Ceylonese ivory was known to be hard and pinkish⁵⁵ although none of the identified Ceylonese carved-ivory objects appear or are described as pinkish. There were very few tusked elephants in Ceylon and the elephants were under the exclusive monopoly of the king. Anyone who caught, mutilated or killed an

⁵¹ Trusted, "Survivors of a Shipwreck," 448

⁵² "Die Portugiesen gelangten im Jahre 1506, auf dem Höhepunkt ihrer grossen Entdeckungsreisen, auf die Insel Ceylon und schlossen ein erstes handelsabkommen mit dem König von Kotte ab - einem der vier konkurrierenden Königreiche im Südwesten der Insel." Jordan-Gschwend and Beltz, *Elfenbeine Aus Ceylon* 12.

⁵³ *Ibid*, 19.

⁵⁴ *Ibid*, 22.

⁵⁵ Chaiklin, "Ivory in World History – Early Modern Trade in Context."

elephant was punished with death.⁵⁶ The elevation of elephants to royal and sacred beings makes it likely that the ivory used for objects crafted in Ceylon most likely were from other sources.

Portability

In the context of investigating "the common visual language across cultural and religious boundaries...",⁵⁷ Eva R. Hoffman offers a model for investigating objects beyond the sites, zones, and borders of their origins. Materials, motifs, symbols, and meaning become multi-valent agencies for an object to move across space and time and "define and be defined by its relation to other objects, people, and representational practices along its pathway of portability."⁵⁸ Objects become mobile because they resonate within the spheres of visual or material culture. In this mode, objects are valued not just because of their compositional materials, their meanings, their representational value, or their origins: they are valued because they express all of these in varying intensities dependent on their place of movement in a network and of its reception within it. Portability along pathways gives meaning to objects beyond the

⁵⁶ Ibid, 23. "Es is bekannt, dass die Portugiesen und Elfenbein aus Ceylon an Aussentposten in Bengalen und Pulicat verkauften, doch es gab nur relativ wenige Elefanten mit Stosszähnen in Ceylon. In Ceylon (Kotte und Kandy) standen die Elefanten unter dem exklusiven Monopol des Königs, das die Jagd reglementierte. Wer einen Elefanten fing, verstümmelte oder tötete, wurde mit dem Tode bestraft. Elefanten nahmen an allen feierlichen Zeremonien teil, und der König ritt stets auf einem männlichen Elefanten (mit Stosszähnen), der einen besondern Stall bewohnte."

⁵⁷ Eva R. Hoffman, "Pathways of Portability: Islamic and Christian Interchange from the Tenth to the Twelfth Century," *Art History* 24, no. 1 (February 2001): 22.

⁵⁸ Ibid, 42.

static or fixed identities that make things of value for a singular quality; “...objects are relevant, not because they are associated with a place, but because of their mobility.”⁵⁹

Like the cultures and communities it connects, this network is dynamic and always in flux, heterogeneous, and perpetually shifting. And it is through this dynamic system of connection that visual and material culture interact, interchange, translate, and entangle.⁶⁰ In this terms of this framework, Barbara Karl situates a model of cultural transfer within the context of Bengali and Gujarati textiles (*colchas*).⁶¹ Karl defines the points of transfer along the network of exchange in a way that allows for the “combinations of different languages, forms, discourses, power structures...”⁶² to play out in the relational identities of objects that are ever-changing “spatially as well as temporally...”⁶³ Karl suggests that Iberian merchants and travelers were already primed for the visual culture of South Asia by their familiarity “to goods from the Islamic World...”⁶⁴ and as such were already prepared for “novel Indian forms.”⁶⁵

There are many objects with the Augustinian motif from the networks of trade to Asia, either through the Indian Ocean or Pacific Ocean, that moved into Europe. A silk velvet panel woven in China for the Portuguese market in the second half of the sixteenth century displays four double-headed eagles astride a pierced heart holding the

⁵⁹ Hans Peter Hahn and Hadas Weiss, eds., *Mobility, Meaning and the Transformations of Things: [Shifting Contexts of Material Culture through Time and Space]* (Oxford, UK : Oakville, CT: Oxbow Books ; David Brown Book Company [distributor], 2013), 6.

⁶⁰ Nicholas Thomas, *Entangled Objects: Exchange, Material Culture, and Colonialism in the Pacific* (Cambridge, Mass: Harvard University Press, 1991).

⁶¹ Barbara Karl, *Embroidered Histories: Indian Textiles for the Portuguese Market During the Sixteenth and Seventeenth Centuries* (Boehlau Verlag, 2016).

⁶² *Ibid*, 15.

⁶³ *Ibid*, 15-16.

⁶⁴ *Ibid*, 25.

⁶⁵ *Ibid*.

fletches of the arrows in its claws (Fig. 7).⁶⁶ Two other textile examples from China for the Iberian market are from the second half of the sixteenth century. The Lampas silk panel displays a pair of double-headed eagles holding in its claws the arrows that pierce a heart (Fig. 8).⁶⁷ The damask silk example displays fifteen of the same motif in golden thread and includes thirty elephants against a rich blue background (Fig. 9).⁶⁸ The Augustinian symbol was a motif that rendered multiple objects and materials ready for reception beyond their origins of manufacture.

Along with the pierced heart, one of the ivory panels (Fig. 10) contains a makara within one of its rectangular registers. The makara is a Hindu mythological creature often half crocodile and half seal, that stands guard at the entrances of temples and sacred spaces.⁶⁹ The makara figure is represented in motifs, design, statuary, and multiple other modes of depiction throughout Asia. It is a motif understood, if not for its meaning, at least by its visual resonance with Indian and Hindu culture. Like the pierced heart, the makara motif places the ivory panels into a network of reception beyond an Indian context. Importantly, Ceylon was a Buddhist kingdom that has a history deeply rooted in the southern Indian cultures of Tamil. The pierced heart and makara motifs allow the ivory panels to circulate in multiple networks of trade and to function in multiple contexts of reception. As well, the roundels and vegetal designs would have placed the in the same receptive space that decorative objects held and which resonated at sites of exchange across the entire trade network.

⁶⁶ Amelia Peck and Amy Elizabeth Bogansky, eds., *Interwoven Globe: The Worldwide Textile Trade, 1500-1800* (New York : New Haven: Metropolitan Museum of Art ; Distributed by Yale University Press, 2013), 50.

⁶⁷ *Ibid.*, 156.

⁶⁸ *Ibid.*, 157.

⁶⁹ Thanks to Prof. Finbarr Barry Flood for the positive identification of this motif. From a personal conversation on Oct. 8, 2016.

The ivory panels from the 1622 shipwreck of the *Nuestra Señora de Atocha* and the *Santa Margarita* belong in a Ceylonese context. The ivory panels have been worn and weathered by time and submersion in salt water but visual comparison to the dozen or so Ceylonese ivory caskets and cabinets provide sufficient visual evidence to support my argument. The ivory panels are shallowly carved in comparison to the Robinson casket but comparison to examples of low-relief carving and animal figures in vegetal roundels (Fig. 11) and (Fig. 12) show that not all of the carved objects were created in deep relief. The ivory panels from the Caribbean shipwreck have symbolic and mythological creatures surrounded by vegetal scrolls. Comparison to examples of the rectangular configuration and animals in roundels (Fig. 13) and (Fig. 14) provides further evidence for my argument. Moreover, the dimensions of the ivory panels and the presence of holes stained with the appearance of oxidized metal traces for fasteners along their edges also place them in the context of ivory caskets and cabinets from Ceylon. Circumstantial evidence includes the presence of Chinese ceramic sherds recovered from the shipwreck which matches sherds recovered from shipwrecks from other shipwrecks in the network of trade from Manila to Mexico along the Galleon trade.

CONCLUSION

Beginning in the mid-1500s, a centuries-long transfer of material and visual culture began from South Asia, across the Pacific, and to Mexico; that material and visual culture was then translated back, as if in a feedback loop, through redefined and recalibrated forms, iconographies, and designs. Globalization is often considered a modern phenomenon brought about by the advances of technology and the growth of international markets, but globalism can also be defined by the mobilities of portable

goods and materials. Objects like the carved ivory panels from the *Atocha* and *Santa Margarita* shipwreck reflect the movement of visual and material culture from Asia and Europe through New Spain, the West Indies, and Tierra Firme in the Early Modern period. It is possible to imagine a map of flow for the ivory and the ivory containers carved from them; African and Muslim trade from the Swahili corridor to Goa, from Goa to Ceylon, from Ceylon to Manila, and from Manila to Acapulco across Mexico and onto European-bound ships. These micro-moments of globalism were defined by common value in traded goods, but were also defined by shared tastes that suggest international connections and create a macro-moment of globalism.

The wreck of the Fleet of 1622 can be viewed alongside the wrecks of other ships in the Indian, Pacific, and Atlantic oceans either through a defined period of lateral-time, e.g. 1506 to 1690, or through location, e.g. the Pacific Ocean, or other shipwrecks separated by time and distance, e.g. the Dokos Shipwreck of 2100-2200 BCE off the southern coast of Greece, the Uluburn Shipwreck of fourteenth-century BCE off the southwest coast of Turkey, or the Belitung Shipwreck of the tenth-century in the Java Sea. The lateral-time model allows us to see the movement of visual and material culture across large distances and networks over a short period of time. The location model allows us to see what kinds of interchange occur within a given limited framework. The categorical comparative can speak to how seas and oceans have contributed to the global movement of people, ideas, and materials at various points in history. There are more models possible and any combination of these can reveal what others may hide but as a methodological approach shipwrecks provide a useful way to get at the ideas behind globalism and its effect on the transfer of visual and material culture.

Bibliography

- A True Relation of That Vvhich Lately Hapned to the Great Spanish Fleet, and Galeons of Terra Firma in America: With Many Strange Deliueries Ofcaptaines, and Souldiers in the Tempest, and Other Remarkable Accidents, Worthy the Obseruation. Also, a Catalogue of Those Persons of Account, Which Eyther Perished in This Tempest, or Were Miraculously Preserued. Faithfully Translated out of the Spanish Originall, as It Is Printed and Published in Madrid, Sevil, Lishbone, and Other Places.* 17th-18th Century Burney Collection Newspapers. London: Printed [by George Eld] for Nathaniel Butter, Nicholas Bourne, and William Sheffard, 1623.
- Abu-Lughod, Janet L. *Before European Hegemony: The World System A.D. 1250-1350.* New York: Oxford University Press, 1989.
- Appadurai, Arjun. *The Social Life of Things: Commodities in Cultural Perspective.* Cambridge ; New York: Cambridge University Press, 1986.
- Barnet, Peter, and Detroit Institute of Arts, eds. *Images in Ivory: Precious Objects of the Gothic Age.* Detroit, Mich. : Princeton, N.J: Detroit Institute of Arts ; in associaton with Princeton University Press, 1997.
- Bassani, Ezio, William Buller Fagg, Susan Mullin Vogel, and Carol Thompson. *Africa and the Renaissance: Art in Ivory.* New York City: Center for African Art : Distributed in the U.S.A. and Canada by Neues Pub. Co, 1988.
- Bentley, Jerry H., Renate Bridenthal, and Anand A. Yang, eds. *Interactions: Transregional Perspectives on World History.* Perspectives on the Global Past. Honolulu: University of Hawai'i Press, 2005.

- Boxer, C. R. *The Dutch Seaborne Empire, 1600-1800*. 1st American ed. The History of Human Society. New York: Knopf, 1965.
- . *The Portuguese Seaborne Empire, 1415-1825*. 1st American ed. The History of Human Society. New York: A. A. Knopf, 1969.
- Braudel, Fernand. *The Mediterranean and the Mediterranean World in the Age of Philip II*. Berkeley, Calif: University of California Press, 1995.
- Bredenkamp, Horst. "Franz Kugler and the Concept of World Art History." *Cultural Histories of the Material World*. Ed. Peter N. Miller. Ann Arbor: U of Michigan, 2013. 249-62. Print.
- Brown, Roxanna M. "Shipwreck Evidence for the China-Manila Ceramics Trade." *Asia & Spanish America: Trans-Pacific Artistic and Cultural Exchange, 1500-1850: Papers from the 2006 Mayer Center Symposium at the Denver Art Museum*. Ed. Donna Pierce, et al. Denver, CO: Denver Art Museum, 2009. 57-68.
- Chaiklin, Martha. "Ivory in Early Modern Ceylon: A Case Study in What Documents Don't Reveal." *International Journal of Asian Studies* 6, no. 1 (January 2009): 37-63.
- . "Ivory in World History – Early Modern Trade in Context." *History Compass* 8, no. 6 (June 1, 2010): 530-42. doi:10.1111/j.1478-0542.2010.00680.x.
- Chaudhuri, K. N. *Asia before Europe: Economy and Civilisation of the Indian Ocean from the Rise of Islam to 1750*. Cambridge ; New York: Cambridge University Press, 1990.
- Chong, Alan¹. "Sri Lankan Ivories for the Dutch and Portuguese." *Journal of Historians of Netherlandish Art* 5, no. 3 (Summer 2013): 1-8.

- Conrad, Sebastian. *What Is Global History?* Princeton: Princeton University Press, 2016.
- Curiel, Gustavo. "Perception of the Other and the Language of 'Chinese Mimicry' in the Decorative Arts of New Spain." *Asia & Spanish America: Trans-Pacific Artistic and Cultural Exchange, 1500-1850: Papers from the 2006 Mayer Center Symposium at the Denver Art Museum*. Ed. Donna Pierce, et al. Denver, CO: Denver Art Museum, 2009. 19-36.
- DeSilva, Chandra Richard. *The Portuguese in Ceylon, 1617-1638*. Colombo: H. W. Cave, 1972.
- Dunn, Oliver. "Trouble at Sea: The Return Voyage of the Fleet of New Spain and Honduras in 1622." *Terrae Incognitae* 11, no. 1 (1979): 29–41.
- Fahy, Brian, and Veronica Walker Vadillo. "From Magellan to Urdaneta: The Early Spanish Exploration of the Pacific and the Establishment of the Manila Acapulco Galleon Trade," 2016.
- Giráldez, Arturo. *The Age of Trade: Manila Galleons and the Dawn of the Global Economy*. Exploring World History. Lanham, Maryland: Rowman & Littlefield, 2015.
- Greene, Jack P., and Philip D. Morgan, eds. *Atlantic History: A Critical Appraisal*. Reinterpreting History. Oxford: New York ; Oxford University Press, 2009.
- Gruzinski, Serge. *The Mestizo Mind: The Intellectual Dynamics of Colonization and Globalization = La Pensée Métisse*. New York: Routledge, 2002.
- Hahn, Hans Peter, and Hadas Weiss, eds. *Mobility, Meaning and the Transformations of Things: [Shifting Contexts of Material Culture through Time and Space]*.

Oxford, UK : Oakville, CT: Oxbow Books ; David Brown Book Company
[distributor], 2013.

Hallett, Jessica. "Pearl Cups Like the Moon: The Abbasid Reception of Chinese Ceramics," in *Shipwrecked: Tang Treasures and Monsoon Winds* (Smithsonian, 2011), 75-81.

Hoffman, Eva R. "Pathways of Portability: Islamic and Christian Interchange from the Tenth to the Twelfth Century." *Art History* 24, no. 1 (February 2001): 17.

Horton, Mark. "The Swahili Corridor." *Scientific American* 257, no. 3 (September 1987): 86.

Jaffer, Amin. *Luxury Goods from India: The Art of the Indian Cabinet-Maker*. London : New York: V & A ; Distributed by Harry N. Abrams, 2002.

Jaffer, Amin, and Melanie Anne Schwabe. "A Group of Sixteenth-Century Ivory Caskets from Ceylon." *Apollo: The International Magazine for Collectors* 149, no. 445 (March 1999): 3-14.

Jordan-Gschwend, Annemarie, and Johannes Beltz. *Elfenbeine Aus Ceylon: Luxusgüter Für Katharina von Habsburg (1507-1578)*. Zürich: Museum Rietberg, 2010.

Jordanova, L. J. *The Look of the Past: Visual and Material Evidence in Historical Practice*. Cambridge: Cambridge University Press, 2012.

Junco, Roberto. "On a Manila Galleon of the 16th Century: A Nautical Perspective," 2016.

Karl, Barbara. *Embroidered Histories: Indian Textiles for the Portuguese Market During the Sixteenth and Seventeenth Centuries*. Boehlau Verlag, 2016.

Kühnel, Ernst. *Die Arabeske: Sinn Und Wandlung Eines Ornaments*. Wiesbaden: Dieterich'sche Verlagsbuchhandlung, 1949.

Kuwayama, George. "Chinese Porcelain in the Viceroyalty of Peru." *At the Crossroads: The Arts of Spanish America & Early Global Trade, 1492-1850: Papers from the 2010 Mayer Center Symposium at the Denver Art Museum*. Ed. Donna Pierce. Denver: Denver Art Museum, 2012. 165-74.

Mauss, Marcel, and W. D. Halls. *The Gift: The Form and Reason for Exchange in Archaic Societies*. New York: W.W. Norton, 1990.

Miller, Peter N., ed. *Cultural Histories of the Material World*. The Bard Graduate Center Cultural Histories of the Material World. Ann Arbor: The University of Michigan Press, 2013.

———, ed. *The Sea: Thalassography and Historiography*. The Bard Graduate Center Cultural Histories of the Material World. Ann Arbor: The University of Michigan Press, 2013.

Palumbo-Liu, David, Bruce Robbins, and Nirvana Tanoukhi, eds. *Immanuel Wallerstein and the Problem of the World: System, Scale, Culture*. Durham, NC: Duke University Press, 2011.

———, eds. *Immanuel Wallerstein and the Problem of the World: System, Scale, Culture*. Durham, NC: Duke University Press, 2011.

Parry, J. H. *The Spanish Seaborne Empire*. 1st American ed. The History of Human Society. New York: Knopf, 1966.

- Peck, Amelia, and Amy Elizabeth Bogansky, eds. *Interwoven Globe: The Worldwide Textile Trade, 1500-1800*. New York : New Haven: Metropolitan Museum of Art ; Distributed by Yale University Press, 2013.
- Phipps, Elena, Johanna Hecht, Cristina Esteras Martín, and Luisa Elena Alcalá. *The Colonial Andes: Tapestries and Silverwork, 1530-1830*. New York : New Haven: Metropolitan Museum of Art ; Yale University Press, 2004.
- Pierce, Donna, Ronald Y. Otsuka, and Frederick and Jan Mayer Center for Pre-Columbian and Spanish Colonial Art, eds. *At the Crossroads: The Arts of Spanish America & Early Global Trade, 1492-1850: Papers from the 2010 Mayer Center Symposium at the Denver Art Museum*. Denver: Denver Art Museum, 2012.
- , eds. *Asia & Spanish America: Trans-Pacific Artistic and Cultural Exchange, 1500-1850: Papers from the 2006 Mayer Center Symposium at the Denver Art Museum*. Symposium Series / Mayer Center for Pre-Columbian and Spanish Colonial Art 2006. Denver, Colo: Denver Art Museum, 2009.
- Rodriguez, Etsuko M. "The Early Manila Galleon Trade: Merchant's Networks and Markets in Sixteenth- and Seventeenth-Century Mexico." *Asia & Spanish America: Trans-Pacific Artistic and Cultural Exchange, 1500-1850: Papers from the 2006 Mayer Center Symposium at the Denver Art Museum*. Ed. Donna Pierce, et al. Denver, CO: Denver Art Museum, 2009. 37-58.
- Rubiés, Joan-Pau. "The Spanish Contribution to the Ethnology of Asia in the Sixteenth and Seventeenth Centuries." *Renaissance Studies*, 2003.
- Sargent, William R. "Porcelains with the Arms of the Order of Saint Augustine: For New Spain? A Theory." *At the Crossroads: The Arts of Spanish America & Early*

Global Trade, 1492-1850: Papers from the 2010 Mayer Center Symposium at the Denver Art Museum. Ed. Donna Pierce, et al. Denver: Denver Art Museum, 2012. 53-66

Schottenhammer, Angela. "The 'China Seas' in World History: A General Outline of the Role of Chinese and East Asian Maritime Space from Its Origins to C. 1800." *Journal of Marine and Island Cultures* 1, no. 2 (December 2012): 63–86.
doi:10.1016/j.imic.2012.11.002.

Schurz, William Lytle. *The Manila Galleon*. Dutton Paperback, D35. E.P. Dutton, 1959.

Smith, Pamela H., Amy R. W. Meyers, and Harold J. Cook, eds. *Ways of Making and Knowing: The Material Culture of Empirical Knowledge*. Bard Graduate Center Cultural Histories of the Material World. Ann Arbor [Michigan]: The University of Michigan Press, 2014.

———, eds. *Ways of Making and Knowing: The Material Culture of Empirical Knowledge*. Bard Graduate Center Cultural Histories of the Material World. Ann Arbor [Michigan]: The University of Michigan Press, 2014.

"The Robinson Casket (Casket) | V&A Search the Collections." *V and A Collections*, December 3, 2016. <http://collections.vam.ac.uk/item/O18316>.

Thomas, Nicholas. *Entangled Objects: Exchange, Material Culture, and Colonialism in the Pacific*. Cambridge, Mass: Harvard University Press, 1991.

Trusted, Marjorie. "Survivors of a Shipwreck: Ivories from a Manila Galleon of 1601." *Hispanic Research Journal* 14, no. 5 (October 2013): 446–62.
doi:10.1179/1468273713Z.00000000060.

- . *The Arts of Spain: Iberia and Latin America 1450-1700*. University Park, Pa. : [London] : [New York]: Pennsylvania State University Press ; V&A Publications ; TheHispanic Society of America, 2007.
- Valera, Ac, Tx Schuhmacher, and A Banerjee. "Ivory in the Chalcolithic Enclosure of Perdigoes (South Portugal): The Social Role of an Exotic Raw Material." *WORLD ARCHAEOLOGY* 47, no. 3 (May 27, 2015): 390–413.
- Vázquez de Espinosa, Antonio, and Sara L. Lehman. *Tratado Verdadero Del Viaje Y Navegación*. Juan de La Cuesta Hispanic Monographs. Series Ediciones Críticas, no. 48. Newark, Del: Juan de la Cuesta, 2008.
- Vázquez de Espinosa, Antonio, and Balbino Velasco Bayón. *Compendio Y Descripción de Las Indias Occidentales*. Biblioteca de Autores Españoles, t. 231. Madrid: Ediciones Atlas, 1969.
- Wallerstein, Immanuel Maurice. *The Modern World-System*. Berkeley: University of California Press, 2011.
- Wigen, Kären. "Cartographies of Connection: Ocean Maps as Metaphors for Interarea History." *Interactions: Transregional Perspectives on World History*. By Jerry H. Bentley. Honolulu: U of Hawaii, 2005. 150-66.



Fig. 1 Panel Fragments recovered from the Santa Margarita shipwreck of the 1622 Fleet, Ivory, Ceylon, late sixteenth century—early seventeenth century, Mel Fisher Maritime Museum in Key West, Florida. Photo by author.



Fig. 2 Archival documentation for Panel Fragments recovered from the *Santa Margarita* shipwreck of the 1622 Fleet, Ivory, Ceylon, late sixteenth century—early seventeenth century, Mel Fisher Maritime Museum in Key West, Florida. Courtesy of Corey Malcom, Director of Marine Archeology, Mel Fisher Maritime Museum.



Fig. 12. Kinrande ware bowl from the Von der Porten collection, and fragment from the Baja California wreck site. Photograph by Edward Von der Porten.

Fig. 3 Kinrande ware bowl from the China-Manila trade route, recovered from the 1576 *San Felipe* shipwreck off the Baja California coast, from Pierce, *Asia and Spanish America*, 66.



Fig. 15. Pieces of ivory, 1610–1680. Excavated from the Palace of the Governors, Santa Fe. Laboratory of Anthropology, Museum of New Mexico. Photography by Blair Clark.

Fig. 4 Pieces of ivory, 1610-1680. Excavated from the Palace of the Governors, Santa Fe, New Mexico. Laboratory Museum of New Mexico. From Pierce, *At the Crossroads*, 163.



Fig. 6 Nesting Boxes, Silver, before 1622, Largest (outer box) H. 2.25 inches, L. 4.5 inches. Salvaged from the 1622 shipwreck of the *Nuestra Señora de Atocha*, private collection. From Peck, *Colonial Andes*, 202.



Fig. 7 Panel, China, for the Portuguese market, second half of the sixteenth century, Lampas silk, 20 x 22.5 inches. Museo Nacional de Arte Antigua, Lisbon. From Peck, *Embroidered Globe*, 57.



Fig. 8 Textile with Crowned Double-Headed Eagles, China, for the Iberian market, second half of the sixteenth century, Lampas silk, 20 x 22.5 inches, The Metropolitan Museum of New York. From Peck, *Embroidered Globe*, 202.



Fig. 9 Textile with Crowned Double-Headed Eagles, China, for the Iberian market, second half of the sixteenth century, Damask silk. From Peck, *Embroidered Globe*, 203.



Fig. 10 Detail, Pierced Heart motif. Panel Fragments recovered from the Santa Margarita shipwreck of the 1622 Fleet, Ivory, Ceylon, late sixteenth century—early seventeenth century, Mel Fisher Maritime Museum in Key West, Florida. Photo by author.



Fig. 11 Kabinettschranck (cabinet), Ceylon, mid- to late-seventeenth century. Ivory with silver fastenings. H. 22 cm, W. 24 cm, D. 16 cm. Private Collections. From *Elfenbeine Aus Ceylon*, 118.



Fig. 12 Kästchen (casket), Ceylon, late-seventeenth century. Ivory with silver fastenings. H. 14.4 cm, W. 19 cm, D. 12.7 cm. Tavora Sequira Pinto Collection, Porto. From *Elfenbeine Aus Ceylon*, 119.



Fig. 13 Kabinettschrank (cabinet), Ceylon, late-sixteenth century. Ivory, teak with silver fastenings. H. 22 cm, W. 24 cm, D. 16 cm. Tavora Sequira Pinto Collection, Porto. From *Elfenbeine Aus Ceylon*, 120.



Fig. 14 Kabinettschrank (cabinet), Ceylon, late-sixteenth century or early seventeenth century.. Ivory, teak with gold. H. 19.5 cm, W. 23.5 cm, D. 18.5 cm. Museo Nacional de Arte Antigua, Lisbon.
From *Elfenbeine Aus Ceylon*, 121.

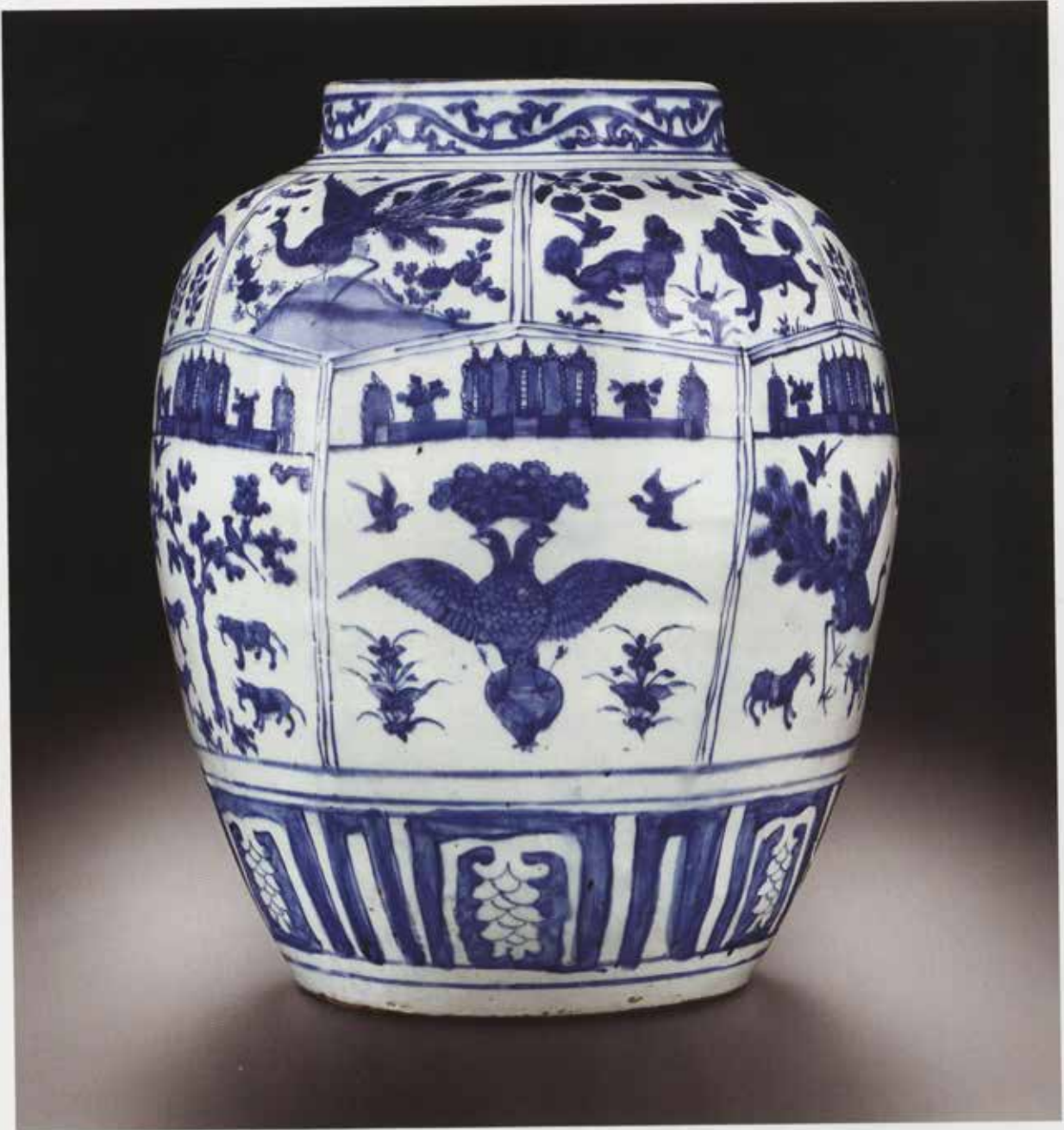


Fig. 15 Jar. Ming dynasty. Wanli period (1590-1635). H. 15.5 inches x Diameter 13 inches. Peabody Essex Museum, Salem, MA. From Pierce, *At the Crossroads*, 54.



Addendum Detail, Makara motif. Panel Fragments recovered from the *Santa Margarita* shipwreck of the 1622 Fleet, Ivory, Ceylon, late sixteenth century—early seventeenth century, Mel Fisher Maritime Museum in Key West, Florida. Photo by author.