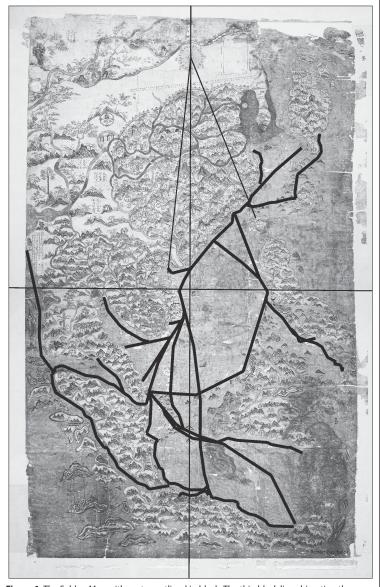


The newly rediscovered Selden Map of China gives us profound insights about how Chinese merchants living along the coast of the Ming Empire and across East Asia understood the world at the dawn of modernity.



**Figure 1**. The Selden Map with routes outlined in black. The thin black lines bisecting the map and the two lines connecting the scale bar and the compass are included for reference and are not part of the original map. For a zoomable image of the map, see the Bodleian's website: http://seldenmap.bodleian.ox.ac.uk/. A Google map Fusion Table with translations of all the maritime locations on the Selden Map, along with georeferenced locations, can be found at http://www.thinkingpast.com/seldenfusionlarge.html. Image Annotations © Robert Batchelor, 2013. Source: © Bodleian Library, University of Oxford, 2012. MS Selden Supra 105.

#### Discovering a Map

In early 2008, while researching in the archives of Oxford University's Bodleian Library, I rediscovered the earliest surviving Chinese map made by maritime merchants. This is the now celebrated Selden Map, a beautifully painted, approximately three-by-five, early seventeenth-century wall map of East Asia. The inscriptions are in Chinese characters, although many indicate the use of the Min language from Fujian. Perhaps the most important aspect of this map is that it includes carefully drawn shipping routes ranging from Nagasaki down to Aceh in Sumatra. An accompanying inscription explains how to go to the Persian Gulf and Red Sea. The map has been named one of the "Treasures of the Bodleian" and was escorted by former governor of Hong Kong, Chris Patten, for a March 2014 exhibition at the Hong Kong Maritime Museum. Many questions remain unanswered about this fascinating map. Using it in a classroom gives students the chance to play the role of historians, coming upon a newly discovered global treasure with fresh eyes. Moreover, because it shows a trading system connecting almost one hundred locations outside of China, it opens up a number of relevant questions for teaching the whole scope of maritime East Asia.

For many people, China still brings to mind the Great Wall and emperors obsessed with tombs and palaces. The Selden Map suggests a very different understanding of China and its place in the world. Rather than depicting the boundaries of a territorial empire, the China of the Selden Map is maritime, reaching out through well-traveled routes and moving goods among different ports. The small map of the Ming Empire (1368–1644) included within this broader world comes from a popular encyclopedia, suggesting the empire itself was not the focus of the merchant who owned the map. Instead, the Selden Map as a whole puts forward an archipelagic vision of East Asia, a network of routes in which China loomed large but was not always the center.

The English lawyer John Selden willed the map to the Bodleian in the 1650s, a time during which China was transitioning between the Ming and Qing empires and was a key driving force of the global economy. Selden was a contemporary of John Milton and Oliver Cromwell, and he had one of the most remarkable libraries in London during the turbulent years of the English Civil War and Interregnum. In an age when the English had just begun to roam the globe, Selden wanted to know how other cultures measured time and space and how one could claim property not only in land but also in the oceans. He collected numerous books in Latin, Greek, Hebrew, and Arabic, as well as Persian and North African astrolabes, and even a Chinese geomantic compass to go with his map.<sup>1</sup>

Visually striking and detailed, the ca. 1619 Selden Map was most likely intended for display in the home of a wealthy Chinese merchant. The mapmaker plotted the system of routes using compass bearings and a scale bar measured in ship's watches or geng, the length of time for a piece of incense to burn, or about 2.4 hours (ten geng per day). As map restoration revealed in 2011, the routes were drawn before the coastlines, cities, and other features. The back of the map has a draft of the main route on the front (from Nagasaki to Pahang on the Malay Peninsula), centered on a navigational point off Fujian Province. Revealing previously unknown chart-making techniques, the Selden Map adds important dimensions to surviving merchant logs of routes or rutters from the period like the Shunfeng Xiangsong, also in the Bodleian and owned by Selden's contemporary Archbishop William Laud. The map also gives a better historical sense of how actual Chinese merchants understood commercial exchange than imperial charts like those for the Zheng He voyages first printed in the Wubei zhi (ca. 1628).2

One place to begin a discussion of this map is the tension it shows between the Silk Roads in the upper-left (northwest) quadrant of the map and the maritime world taking up the eastern and southern parts. Northwest of the Ming Empire, the mapmaker has drawn the most famous sites

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of the Silk Roads tributary trade. The Shaanxi Administrative Region (Shanxi xing dusi), an important military frontier in the Ming, opens onto the Jade Gate Pass (Yumen guan). Next to these appears an elaborate depiction of the walls and palace of the "Loyal and Submissive King" tributary at Hami (labeled Zonji cheng). But this important node in the Ming economy and system of international relations had fallen to the Mongols in 1513. Beyond that point, and no longer accessible, the map shows the Yili River and Lake Balkhash. To the southwest, where Chinese myths placed the Star Constellation Sea, is the Indian Ocean and Calicut (Guli) with instructions on how to reach Aden (Adan guo), Ormuz (Hulumosi), and Zufar (Far guo) in the Middle East. All of these, once strongly connected to the Mongol Empire (the Yuan dynasty in China, 1206–1368) and the longer history of China itself, were by the sixteenth century in many ways beyond the reach of Chinese merchant sailors.

Why would a merchant from Fujian or the overseas Chinese community depict these areas, which were far from his experience and unlikely to yield profit? One answer is that the map shows a shift from the old, extensive trading world of the Yuan to the new, intensive trading world of the late Ming. The Ming boom began with the Japanese discovery of silver in the 1520s and the arrival of Portuguese traders in the region between the 1510s and 1540s. Then from the 1570s, after a period of uncertainty and the Spanish establishment of the trans-Pacific route, ocean-going trade expanded on a massive scale. Silver, already a valuable import from the 1520s, flowed in from both Japan and through Spanish Manila, something alluded to on the Selden Map itself. Urban coastal areas in Fujian, as well as Zhejiang and Guangdong provinces, were the new nodal points rather than distant Beijing, where by the early seventeenth century dynastic struggles were brewing. The map offers a sense of how the coastal merchants of eastern China and the overseas Chinese had rendered the kind of pan-Asian empire of the Mongols unnecessary. Given the boom in Chinese printing during this period, including famous novels like the Three Kingdoms Romance, students might compare what was going on in maritime East Asia with the European Renaissance, in particular efforts to use science and mathematics to build a more comprehensive picture of the world.

Another possible discussion topic is the current and parallel "rise of eastern China" in the twenty-first century, something pointed to by Robert McColl in a 2011 issue of *EAA*. Whereas in the 1950s and 1960s the People's Republic of China focused on Tibet and its borders with India, an inland strategy reminiscent of the Yuan and the Qing, in 2012 the PRC placed a map of part of the South China Sea on its passport. In the South China Sea, various parts of the Paracels and Spratleys are now contested among China, Việt Nam, and the Philippines. Meanwhile, to the north, Japan, Taiwan, and China face off over the Senkaku or Diaoyu Islands. The Selden Map does little to settle such disputes, but it does help us understand how current disputes are being imagined. It also makes a good pivot point for taking students backward into the Yuan and earlier dynasties and forward into the Qing and modern era.<sup>3</sup>

# A Window on the Environmental and Commercial History of Maritime Asia

For the historian, the map offers profound insights into how a Chinese merchant in the seventeenth century might have thought about things like the environment, the sciences of navigation and geography, and relationships to non-Chinese speaking merchants and peoples. Some scholars like to think of maritime East Asia as a kind of Mediterranean Sea, concentrating trade in a space protected from larger ocean currents. But this can be misleading in many ways, and the Selden Map helps introduce those kinds of differences historically.

As the map shows, the core of the Chinese maritime trading system during the Ming dynasty was a kind of "T" structure centered on the coastal provinces of Fujian and Guangdong. One branch of these routes

led northeast toward Japan, one branch went southeast toward Manila, and one branch went southwest toward Việt Nam and the South China Sea. The dark dot off Quanzhou and Zhangzhou in Figure 2 was the center of this system for Fujianese traders, and the directional headings on the routes themselves radiate from this point on the map. As the cartouche (decorative emblem) on the west side of the Selden Map suggests, this system for a long time had been connected with the equally dynamic Indian Ocean trade through the Straits of Malacca and Sunda. It had more recently become linked to the Americas with the trans-Pacific silver trade, and the Selden Map clearly labels the passage through which the Spanish reached Manila. Oceans met oceans in maritime East Asia.

The northern parts of this trading system could be dangerously open to the Pacific Ocean. Chinese and Japanese sailors, moving along the route from Fujian or Manila to Japan, could be swept off course by a storm. The current might take them as far as Kamchatka or, worse, into the vastness of the North Pacific on a ship with only limited supplies. Maps of the garbage patches of the Pacific Ocean or the debris field from the 2011 tsunami in Japan make good teaching tools that can link contemporary environmental issues with historical ones about how maritime Asia developed.<sup>4</sup> On the Selden Map itself, traces of the Kuroshio Current appear as a kind of boundary suggesting where the "Eastern Ocean" (*Donghai*) begins. The map includes specific instructions on what to avoid when sailing among the island chains going from Taiwan to Japan. So when using the Yakushima passage in the Osumi Islands, the map notes that it is "flowing eastward, very tight." The routes largely stay to the west of the island chains, sheltered from typhoons and other threats from the Pacific.



mote, and Yonaguni. Notice here the depiction of two landings on Taiwan [Jiali lin (Jiali Forest) and Beigang, Taiwan], as well as instructions about avoiding the Kuroshio Current in the Balintang Channel ["This passage, flowing eastward, very tight" (ci men liushui dong shen jin)]. This is the earliest map we have of the Chinese settlements emerging on Taiwan at the beginning of the seventeenth century, when colonization of the island from the mainland began. Source: © Bodleian Library, University of Oxford, 2012. MS Selden Supra 105.

## The Selden Map reveals how different the East Asian maritime world was from the Mediterranean or the Atlantic Worlds and how it required different kinds of technologies.

The phenomena generated by the Pacific Ring of Fire, including tsunamis, volcanoes, and earthquakes, meant that catastrophic events similar to the eruption at Pompeii (79 CE) or the earthquake of Lisbon (1755) were much more common in earlier areas of maritime Asia. The Ring of Fire also generated wealth, as deposits of precious metals like gold, silver and copper were concentrated along the lines of tectonic activity circling the Pacific, whether in Japan and Borneo or Mexico and Bolivia. Relying on such environmental resources, the Spanish Empire along

Navigational point off point near Pahang Hoi An Navigational poin Navigational point Draft of scale bars off Quanzhou and Zhangzhou (A & B) and orienting square Trunk route with egements enumerated **Enlargement of inscription** Navigationa Reverse of Selden Map point near With Features Augmented off Nagasaki © Robert Batchelor

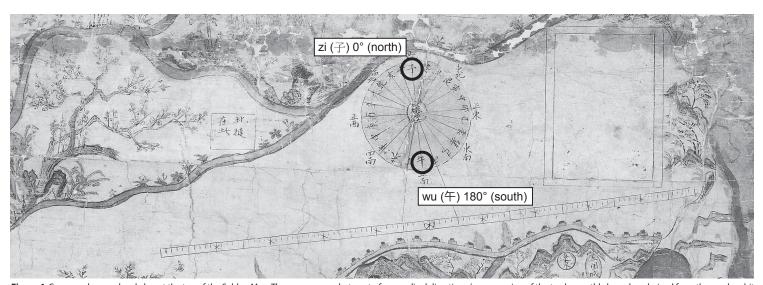
Figure 3. Reverse of the Selden Map with features augmented. The segments used for making the trunk route are numbered. Note the mysterious and as of yet unidentified inscription, which may hold clues to when, where, and by whom the map was made. Source: © Bodleian Library, University of Oxford, 2012. MS Selden Supra 105.

the Pacific-American coast and the mines of Japan generated most of the commodity metals that drove the famous "silver cycle" from the 1540s to the early nineteenth century.

The unpredictable dangers of the Pacific Ocean were compounded by more regular restraints emerging out of the Indian Ocean. Monsoon winds generated there made trade cyclical over the course of a year, requiring waiting periods of months for ports in Southeast Asia. For navigators, this combination of factors made following established maritime trade routes and stockpiling of goods in diverse foreign ports a requirement. As a result, sizable communities of overseas Chinese, especially from Fujian, developed in ports from Banten on Java to Nagasaki. They had libraries of books and maps printed in Fujian. The Selden Map shows this—highlighting ports and routes where overseas Chinese had a presence. Like their European counterparts, Chinese overseas merchants used mathematics for navigation and accounting and developed technologies like the maritime compass to create durable networks that were flexible enough to adjust to changing circumstances.

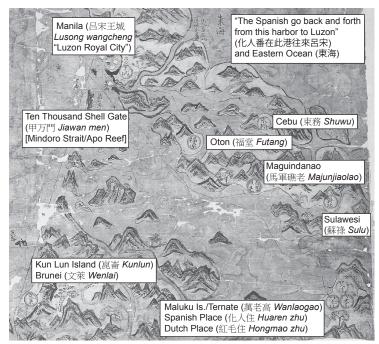
But only in very exceptional cases, like the famous Zheng He voyages

(1405-1433), did empires and states help defray the costs for Chinese merchants associated with trade in East Asia. This was in sharp contrast with European voyages after 1492, which were sponsored by monarchs or state-chartered investment schemes. Chinese, Malay, and other merchants in East Asia thus used smaller and less expensive ships. With the exception of the Japanese in the late sixteenth and early seventeenth century, these were generally lightly armed. Li Dan in Hirado, Japan, who rented a house to English East India Company merchants in the 1610s and early 1620s, was a good example of this. In a world where the line between pirates, smugglers, and merchants could be unclear, Fujianese merchants with long-distance trading empires wanted respectability and the ability to display access to markets, information, and capital to investors and rivals. An artifact like the Selden Map, profuse with foliage and covered with technical information, showed a mastery of both aesthetic beauty and technical knowledge in relation to nature.



**Figure 4.** Compass, box, and scale bar at the top of the Selden Map. The compass marks twenty-four cardinal directions (an expansion of the twelve earthly branches derived from the yearly orbit of *Suixing*, or Jupiter). The twenty-four directions divide the compass into 15° intervals. These can then be subdivided into 5° intervals by writing two characters. So if zi (子) is 0° and gui (癸) is 15°, then zigui (癸子) is 5° and guizi (癸子) is 10°. A complete table of the twelve earthly branches and the twenty-four directions in several East Asian languages can be found at http://en.wikipedia.org/wiki/Earthly\_Branches. Image Annotations © Robert Batchelor, 2013. Source: © Bodleian Library, University of Oxford, 2012. MS Selden Supra 105.

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**Figure 5**. The routes extending southward from Manila toward Brunei and the Maluku Islands. This part of the Selden Map indicates the presence of the Spanish and the Dutch, notably the San Bernadino Strait and the contested island of Ternate (ca. 1606–7). Source: © Bodleian Library, University of Oxford, 2012. MS Selden Supra 105.

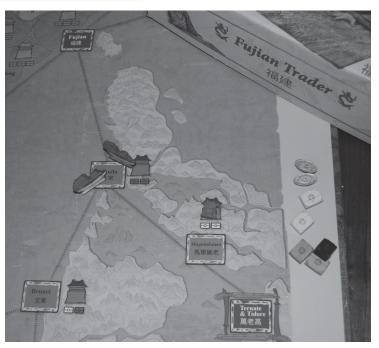
#### Navigating East Asian Seas: Some Teaching Strategies

The Selden Map is a good teaching tool for introducing students to East and Southeast Asian history and geography, and it offers a way of introducing the merchant rather than the mandarin as an important figure in Chinese history. Teachers who want to spend more time with the map teaching higher-level concepts might want to try one of the following approaches to get students thinking like a merchant.

One approach is to use the map to think about what the K-12 Next Generation Science Standards refer to as the "crosscutting concept" of systems and system models. The Selden Map depicts a model of a political, economic, and even linguistic and kinship system. The map in some ways also shows a system within a system. The conventionally mapped provinces of the Ming Empire contrast with the routes connecting the ports of maritime East Asia. Depicting and understanding the latter kind of system relied on specific mathematical techniques.

Begin by showing students the abstract principal route on the back of the map. The mapmaker knew the *geng* (times for travel) along various vectors, assembling routes out of these segments. On Figure 3, they are numbered to show how many segments made up one route. Using the twenty-four Chinese compass points, which could be subdivided into 5° intervals, each vector would be plotted in a particular direction with a determined length. A basic exercise would be to have students employ the same techniques—using a drafting compass to draw lines and a protractor to measure angles—to make a walking map of their neighborhood, the school grounds, or campus. They could then write about how merchants understood space and how this might have been different from the perspective of the imperial bureaucracy in Beijing and the provinces.

Another way of making the map accessible is to literally play it using a board game titled Fujian Trader. In the game, players are Chinese merchant families who try to acquire influence over ports, trade goods to amass wealth, and then survive the Ming to Qing transition. It was created by Sari Gilbert of the Interactive and Game Design Department at the Savannah College of Art and Design, myself, and a number of game design students. As a board game, Fujian Trader simplifies and abstracts the map but does so in a way that maintains the basic structure of the relations shown on the



**Figure 6**. The same region as Figure 5 on the board game. Merchant families vie for influence over these ports. Source: © Robert Batchelor, 2014.

map (see Figures 5 and 6 for a comparison). This allows the map to be read and indeed "played" in meaningful ways without overloading students with information.

The curriculum accompanying the game divides it into three play sessions. In "Maritime Trader," students build a network of ports. In "Guanxi," they develop influence in the Ming Empire. And in "Manchu Invasion," they try to preserve their wealth as the Manchus invade across the Great Wall. The

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supporting material is designed to aid in teaching East Asian history and geography, as well as to bring STEM-related concepts and practices like system models and game design into humanities and social science curriculums.

These exercises can give students a sense of what is most exciting about the Selden Map—the way it opens a window onto the highly dynamic maritime world of East Asia in the sixteenth and seventeenth centuries. Most world histories focus on the Atlantic World as the key space driving political, economic, scientific, and ecological change during this period. The Selden Map is beginning to draw attention to how changes in maritime East Asia during the same period profoundly shaped the modern world.

*Editor's Note*: See the website www.fujiantrader.com, which includes a video introduction to the game. For those interested in participating in the curriculum testing phase, a limited number of copies of the game can be obtained as a prototype for classroom use by writing to Robert Batchelor (batchelo@georgiasouthern.edu).

#### **NOTES**

1. Selden's geomantic compass, which he seems to have obtained with the map, can be seen at http://tinyurl.com/qewngcn. The Codex Mendoza has been entirely digitized on Wikipedia: http://commons.wikimedia.org/wiki/Codex\_Mendoza. A digital copy of Marchamont Nedham's English translation of Selden's *Mare Clausum* ["Closed Seas," 1635], which was published in 1652 to support the first Navigation Act, can be found at http://tinyurl.com/m96x6w7. Selden's book responded to the treatise by Hugo Grotius titled *Mare Liberum* ["Free Seas," 1609], which is available in a modern edition by David Armitage at http://tinyurl.com/ogtrvg3.

- 2. There are four major pieces of English language scholarship telling the story of the Selden Map at this point. My "The Selden Map Rediscovered: A Chinese Map of East Asian Shipping Routes, c.1619," *Imago Mundi* 65, vol. 1 (January 2013), 37–63, with an accompanying piece by Stephen Davies about declination on the map, is the shortest introduction to most aspects of the map. New and more elaborate diagrams related to the map appear in my recent book *London: The Selden Map and the Making of a Global City,* 1549–1687 (Chicago: University of Chicago Press, 2014). Two works that offer a good introduction to the map are Timothy Brook, *Mr. Selden's Map of China* (London: Profile Books, 2014) and Patricia Seed, *The Oxford Map Companion* (New York: Oxford University Press, 2013).
- 3. Tonio Andrade's work detailing the rise of the Zhengs on Taiwan is a good place to start in going forward to see what happened in maritime China after the making of the Selden Map. His first book, *How Taiwan Became Chinese: Dutch, Spanish, and Han Colonization in the Seventeenth Century* (New York: Columbia University Press, 2008), is entirely online at http://www.gutenberg-e.org/andrade/. His newer book, *Lost Colony: The Untold Story of China's First Great Victory Over the West* (Princeton: Princeton University Press, 2011), is an accessible and exciting read for students.
- 4. A NOAA poster illustrating how the garbage patches form can be found at http://tinyurl.com/nc6zwxn. For tsunami debris, see the website of the International Pacific Research Center, which also is collecting images of the kinds of debris that has floated ashore in places like Hawai'i and Oregon at http://tinyurl.com/qxra63a.

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