Journal of Southeast Asian Studies, 53(1-2), pp 4–30 March–June 2022.
 doi:10.1017/S0022463422000248

Maritime trading networks and late imperial China's imperfect rediscovery of Southeast Asian geography, 1500–1740

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This article shows that the descriptions of Southeast Asian geography contained in Ming and Qing Chinese sources that used observations collected from contemporary mariners reflect the structure of the maritime trading networks in the region. It examines several Chinese textual studies of Southeast Asia, navigational rutters, and maps, and uses geographic information system mapping to visualise and compare the extent of the authors' and cartographers' knowledge of the region. The article then takes the findings and situates them in the context of early modern Southeast Asian economic history to explain how the Chinese networks were transformed.

The present article is an examination of the link between studies of Southeast Asia written by early modern Chinese scholars and the activities of Chinese sailors and merchants in that region. It proposes that the early modern sources illustrate the extent and structure of China's maritime trading network in Southeast Asia during different periods, both by their contents and by their lacunae. Beginning in the sixteenth century, some scholars began gathering up-to-date information on Southeast Asia from mariners in order to give their readers contemporary descriptions without relying on accounts that had been written centuries earlier. However, this strategy was limited by the geographic extent of the trading networks that existed at the time of the scholars' research. Chinese mariners could usually only offer detailed information on the Southeast Asian subregions that their ships had actually sailed to. Subregions that lay beyond the trading network would usually receive no more than a passing mention, if the names of specific states and ports were included at all. These early modern sources derived from the experiences of contemporary mariners therefore reflect the changing dimensions of the Chinese trading network in Southeast Asia. As well, the Chinese sources, when examined alongside current scholarship on Southeast Asian economic history, can help us understand how the

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interaction of Chinese, European, and indigenous commercial systems restructured trade in Southeast Asia and produced new shared networks that functioned in ways distinct to their historical moment.

The first part of this article examines several Ming and Qing scholarly studies of Southeast Asia and then compares their contents to navigational rutters and maps created during the same periods. Following a number of recent historical mapping projects,[1] the article also uses geographic information system technologies to plot both the destinations and sailing routes described in the sources onto modern maps, visually reproducing their geographic information. This allows for the visualisations of the geography of Southeast Asia and the maritime trading system within it as it was understood by early modern Chinese writers and cartographers. These visualisations in turn allow comparisons of the geographic representations at the same scale. Consequently, the modern maps we have produced from both the textual sources and traditional maps show how the imagined geography of Southeast Asia changed over the course of the tortuous historical transition from the Ming to Qing dynasties.[2]

Our analysis reveals changes in the depth and limits of Chinese geographic knowledge of Southeast Asia during the late Ming period (roughly 1500 to 1644) and the early Qing period after the dynasty's legalisation of maritime trade (1684 to about 1740). Perhaps surprisingly, during the late Ming the authors of the various sources seem to have had a more extensive geographic knowledge of Southeast Asia than later scholars. In the early Qing period the textual studies, rutters, and maps seem to have had up-to-date information on a handful of specific subregions and ports, including Siam, Luzon, western Java, and the Trinh and Nguyen domains in what is now modern Vietnam. Other areas that the Ming authors and cartographers had included, especially ports in eastern Java, the Lesser Sunda Islands, Sumatra, and the Straits of Melaka, are largely absent in the early Qing-era sources.

The reason for this divergence in the depth and breadth of information in the sources is most obvious in their descriptions of sailing routes. Before the collapse of the Ming dynasty, the textual sources, rutters, and maps that describe Southeast Asia all include routes that linked China not only to the relatively near ports of Luzon and Indochina, but also to ports in Sumatra, the southern Malay Peninsula,

1 See for example, the University of Southampton's 'The merchant fleet of late medieval and Tudor England, 1400–1580', http://www.medievalandtudorships.org/ (last accessed 20 June 2021); the Research Center for Humanities and Social Sciences of the Academia Sinica's '*Pi hai ji you* dong tai di tu yu ying pian 《裨海紀遊》 動態地圖與影片' [*Pi hai ji you* dynamic map and film], http://gis.rchss.sinica.edu.tw/google/?p=3831 (last accessed 20 June 2021); and Luo Fengzhu 羅鳳珠, Bai Biling 白璧玲, Liao Xuanming 廖泫銘, Fan Yijun 范毅軍 and Zheng Jinquan 鄭錦全, 'Tang dais hi ren yin di tu jian gou: Li Bai, Du Fu, Han Yu 唐代詩人行吟地圖建構：李白、杜甫、韓愈' [Maps of relocation and poems of Tang dynasty poets: Li Bai, Du Fu, and Han Yu], *Tu shu guan xue yu zi xun ke xue* 圖書館學與資訊科學 40, 1 (2014): 4–28.

2 Mapping the locations and shipping lanes described in the textual sources required the identification of many premodern Chinese toponyms for Southeast Asian locations, which are often inconsistently used even within individual sources. To make many of these identifications the present study has relied on Chen Jiarong 陳佳榮, Xie Fang 謝方 and Lu Junling 陸峻嶺, eds, *Gu dai nan hai di ming hui shi* 古代南海地名彙釋 [Collection of ancient geographic terminology of the South Sea] (Beijing: Zhong hua shu ju, 1986); and Chen Jiarong's online database, 'Nan ming wang 南溟網', http://www.world10k.com/blog/?p=2028 (last accessed 20 June 2021).

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

eastern Java, and the Lesser Sunda Islands. In the Qing sources, ports in these subregions are sometimes mentioned, but with a few obvious exceptions, such as Johor and Palembang, they are not linked to China or other ports by explicit routes. The implication is that Chinese ships had sailed to ports in these subregions during the late Ming period, but were not doing so in the early Qing.

The final section of this article will attempt to offer some explanations for how larger changes within the trading worlds of Southeast Asia had brought about this reshaping of the Chinese network after the end of the Ming dynasty. Anthony Reid's well-known 'age of commerce' theory proposes a general economic decline in Southeast Asia during the mid-seventeenth century thanks to a number of factors, most importantly a cooler global climate, a weakening of global trade, and the monopolistic policies of the Dutch Vereenigde Oostindische Compagnie (VOC).[3] Consequently, according to Reid, many previously important port emporia withdrew from the region's commercial world, leaving a larger and larger share of trading activity concentrated in a handful of centres, but most especially the European enclaves.[4]

At first blush it appears that the less extensive Qing-era trading network and consequently more restricted geographic knowledge of Chinese writers and cartographers supports Reid's hypothesis. But on closer examination, only some of the changes to the geographic scope of the trading network can be easily attributed to the factors he cites. The northern coast of Java and the Lesser Sunda Islands were areas where Chinese geographic knowledge contracted between the late Ming and early Qing periods. In this case the contraction was certainly a result of the expansion of Dutch power along Java's *pasisir* in the 1670s and 1680s, and the company's insistence thereafter that China-based ships restrict their Javanese trade to Batavia. However, along the northern littoral of the Java Sea, the early Qing-era sources suggest that Banjarmasin on the south coast of Borneo became the terminus for most China-based shipping, and this was likely not because of a decline or a retreat from commerce by other ports in the eastern archipelago. Instead, more recent scholarship by Jennifer Gaynor and others has shown that despite the VOC's 1669 conquest of Makassar, southern Sulawesi's most important port in the seventeenth-century, a healthy trading system continued in eastern Southeast Asia dominated by Bugis traders and other independent indigenous groups.[5] Similarly, in the Straits of Melaka subregion, the lack of accurate detail about most port centres except Johor in Qing sources may reflect the deepening state-integration that J. Kathirithamby-Wells has described. As state power in major centres grew during the seventeenth century, merchants based in those centres were increasingly able to penetrate the production sites of export goods bypassing smaller centres, thus increasing the predominance of their own bases as shipping hubs.[6]

3 See Anthony Reid, *Southeast Asia in the age of commerce, 1450–1680, vol. II: Expansion and crisis* (New Haven: Yale University Press, 1993), pp. 267–330; and Anthony Reid, *A history of Southeast Asia: Critical crossroads* (Chichester: Wiley, 2015), pp. 142–56.

4 Reid, *Southeast Asia*, p. 303.

5 Jennifer L. Gaynor, *Intertidal history in Island Southeast Asia: Submerged genealogy and the legacy of coastal capture* (Ithaca, NY: Cornell University Press, 2016).

6 J. Kathirithamby-Wells, 'Forces of regional and state integration in the western archipelago, *c.*1500–1700', *Journal of Southeast Asian Studies* 18, 1 (1987): 24–44.

To make these arguments, this article focuses solely on the handful of early modern Chinese sources concerning Southeast Asia whose authors attempted to provide contemporary descriptions of the region. Though a variety of books that discussed Southeast Asia were written in the late Ming period, and to a lesser degree the early Qing, many of them relied primarily on older materials dating back to Zheng He's 鄭和 voyages in the early fifteenth century or earlier. The first effort to write about the region using up-to-date information appears to have been the very short *Hai yu* 海語 (Sea talks), written by the scholar Huang Zhong 黃衷 in the early sixteenth century.[7] Huang was followed in the early seventeenth century by Zhang Xie 張燮, the author of the celebrated *Dong xi yang kao* 東西洋考 (Record of the eastern and western oceans).[8] In the Qing period, only a decade or so after the 1684 legalisation of maritime trade the travel-writer Yu Yonghe 郁永河 added an appendix to his *Pi hai ji you* 裨海紀遊 (The small seas travel record), which offered a brief overview of overseas geography, meaning mostly Southeast Asia, which he based on the accounts of other travellers.[9] About thirty years later, Chen Lunjiong 陳倫炯 wrote a much more extensive account of the world's geography in his *Hai guo wen jian lu* 海國聞見錄 (A record of what is known of the ocean countries), which he also based largely on the accounts of mariners.[10]

The article will compare these textual studies to contemporary navigational rutters and maps that offer descriptions of sailing routes in Southeast Asia. The rutters, the Ming-era *Shun feng xiang song* 順風相送 (Fair winds for escort) and the early Qing *Zhi nan zheng fa* 指南正法 (General compass-bearing sailing directions), were written as guidebooks for navigators. They describe routes that ships could take from Chinese ports to destinations in Southeast Asia by guiding them step-by-step from landmark to landmark with directions and distances. Similarly, the Selden Map of China, created in the late Ming period, and the map of Southeast Asia that the military official Shi Shipiao 施世驃 commissioned in the 1710s both describe the sailing routes directly with clear lines drawn between China and the ships' Southeast Asian destinations.

A final note on terminology and the categorisation of geographic space is necessary here. The present study takes the argument of Martin Lewis and Kären Wigen's *Myth of continents* to heart.[11] Despite using the term 'Southeast Asia' throughout, we do not assume that this space as a region objectively exists or possesses an internal coherence. Rather, it is a convenient modern translation for the arena of maritime activity that Zhang Xie referred to as the *dong yang* and *xi yang* (western and eastern oceans) and that Chen Lunjiong referred to as the *dong nan yang* and *nan yang*

7 Huang Zhong 黃衷, *Hai yu* 海語 [Sea talks] (1536). The edition consulted for this article was the digitised version available through the *Ai ru sheng shu ju ku* 愛如生數據庫 [Erudition database].
8 Zhang Xie 張燮, *Dong xi yang kao* 東西洋考 [Record of the eastern and western oceans] (Beijing: Zhong hua shu ju, 1981).
9 Yu Yonghe 郁永河, *Pi hai ji you* 裨海紀遊 [The small seas travel record] (Taipei: Taiwan yin hang, 1959).
10 Chen Lunjiong 陳倫炯, *Hai guo wen jian lu* 海國聞見錄 [A record of what is known of the ocean countries] (Taipei: Taiwan yin hang, 1958).
11 Martin W. Lewis and Kären E. Wigen, *The myth of continents: A critique of metageography* (Berkeley: University of California Press, 1997).

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

(southeastern and southern oceans).[12] Essentially, the term here refers to the area from Vietnam to Luzon and the northern tip of Sumatra to Timor and the Maluku Islands, the effective sailing limit of Chinese ships between about 1500 and 1800.

Scholarship on foreign geography in early modern China

There is a rich literature on Ming and Qing-era perceptions of China's maritime frontier and its overseas neighbours. To date, the majority of it has been focused on answering questions concerning the actions and attitudes of China's late imperial states and therefore relatively little has been said about the origins and structure of knowledge related to overseas regions, or about the possession of knowledge by actors outside of the state.[13] However, there is also a tradition of research on early modern navigational sources, including maps and rutters.[14] Because the navigational sources were created for mariners and probably in most cases by mariners, their contents are naturally direct descriptions of contemporary sailing patterns, a type of information that usually did not concern China's imperial governments. The present article is more closely related to these studies of navigational sources, and argues the textual studies that relied on the accounts of mariners are also necessarily descriptions of the sailing and trading systems that existed in Southeast Asia, albeit indirect and partly unintentional ones.

Two scholars have recently tackled the question of late imperial Chinese knowledge of foreign geography head-on, and their findings are particularly relevant to the present study. The first is Matthew Mosca's work on Qing China's understanding of India and Indian geography, one of the most imaginative and incisive recent examinations of early modern Chinese intelligence on foreign states. According to Mosca, the Qing perception of India (both within the government and within scholarly circles) was the product of an approach he refers to as 'geographic agnosticism'. Rather than attempting to formulate a single unified geographic vision in which data could be fit without contradiction as contemporary European scholars were doing, Chinese

12 See Qiu Xuanyu 邱炫煜, 'Zhong guo hai yang fa zhan shi shang "Dong nan ya" ming ci su yuan de yan jiu 中國海洋發展史上「東南亞」名詞溯源的研究' [Research on the origin of the term 'Dong Nan Ya' in the development of Chinese maritime history], in *Zhong guo hai yang fa zhan shi lun wen ji* 中國海洋發展史論文集 [Essays in Chinese maritime history], vol. 4, ed. Wu Jianxiong 吳劍雄 (Taibei: Zhongyang Yanjiu Yuan, 1991).

13 See for example, Jane Kate Leonard, *Wei Yuan and China's rediscovery of the maritime world* (Cambridge, MA: Harvard University Press, 1984); Ronald C. Po, *The blue frontier: Maritime vision and power in the Qing empire* (Cambridge: Cambridge University Press, 2018); Ng Chin-keong, *China's maritime southeast in late imperial times* (Singapore: NUS Press, 2017); and John E. Wills, Jr., 'Contingent connections: Fujian, the empire, and the early modern world', in *The Qing formation in world historical time*, ed. Lynne Struve (Cambridge, MA: Harvard University Asia Center, 2004).

14 For some of the best examples see Chen Jiarong 陳佳榮, '"Ming wei jiang li ji Zhang Quan hang hai tong jiao tu": Bian hui shi jian, te se ji hai wai jiao tong di min glue xi 《明末疆里及漳泉航海通交圖》編繪時間, 特色及海外交通地名略析' [Notes on the Selden Map of China with a focus on its compilation, features and toponymies], *Hai jiao shi yan jiu* 海交史研究 2 (2011): 52–66; Roderich Ptak, *China, the Portuguese, and the Nanyang: Oceans and routes, regions and trade (c.1000–1600)* (Aldershot: Ashgate, 2004), chap. 7, pp. 106–9; J.V. Mills, 'Chinese navigators in Insulinde about A.D. 1500', *Archipel* 18 (1979): 69–93; Timothy Brook, *Mr. Selden's map of China: Decoding the secrets of a vanished cartographer* (New York: Bloomsbury, 2013); and Timothy Brook, *Completing the map of the world: Cartographic interaction between China and Europe* (Taibei: Institute of Modern History, Academia Sinica, 2020).

geographers treated their various contradictory sources as a range of possibilities that were all worthy of consideration. Thus the geographers would quote medieval Buddhist texts alongside more modern Muslim and Jesuit descriptions of India, prioritising the presentation of a plurality of information over the determination of a single conclusive statement.[15] Even more recently, Elke Papelitzky has closely examined seven late Ming 'world histories', and has come to essentially the same conclusion as Mosca. The descriptions of foreign countries in these texts relied primarily on 'a patchwork of previous sources' synthesised uncritically.[16] Most of the authors therefore evince the same sort of agnosticism towards the veracity of their texts as the ones from the Qing period that Mosca studies, and most make no effort to seek out up-to-date information for their descriptions. The only exception that Papelitzky identifies is in the *Si yi guan kao* 四夷館考 (Record of the foreigners' institute), in which the author cites an interview with a contemporary Siamese envoy.[17]

The texts examined in the present study (table 1) are therefore not representative of the typical methods used by scholars studying foreign countries in the late Ming and early Qing periods. The focus here is on a particular strain of scholarship on Southeast Asia that prioritised first-hand information. Some geographic agnosticism is evident, especially in the sections on foreign customs, but in each case the primary source of information the authors relied on were reports given by contemporary Chinese mariners who had actually visited the countries described in the texts. This study therefore does not dispute any of Mosca's or Papelitzky's conclusions, but it does attempt to show that there were texts that did privilege first-hand accounts over a synthesis of older works, and these provide a particularly useful window onto Chinese activity in Southeast Asia and onto the region's larger trading world as well.

Late Ming geographies, 1500–1644

The majority of Ming Chinese geographers who wrote about Southeast Asia during the sixteenth and early seventeenth centuries offered their readers little in the way of up-to-date information on the geopolitics of the region. This was perhaps because most of them were scholars and officials who had little connection to China's coastal regions, and whose primary interest in foreign geography was the security of China's land frontiers. Their works relied primarily on geographic information contained in books published during earlier dynasties, on the works produced by authors who accompanied Zheng He to Southeast Asia and the Indian Ocean in the early fifteenth century, and sometimes on government records related to tribute embassies sent to China.[18] These types of sources were able to speak in general terms about the cultures, local products, and political systems of Southeast Asian states, but they had very little information about any recent developments beyond China's shores.

However, during the latter half of the Ming dynasty there were at least two authors who did attempt to use more current sources of information in their writings

15 Matthew W. Mosca, *From frontier policy to foreign policy: The question of India and the transformation of geopolitics in Qing China* (Stanford, CA: Stanford University Press, 2013), pp. 25–66.
16 Elke Papelitzky, *Writing world history in late Ming China and the perception of maritime Asia* (Wiesbaden: Harrassowitz Verlag, 2020), p. 169.
17 Ibid., pp. 83–5.
18 See ibid.

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

Table 1. Early modern Chinese sources discussed in this study

Name	Author	Year	Type
Hai yu 海語	Huang Zhong 黃衷	1536	Textual study
Shun feng xiang song 順風相送		Late 16th / early 17th century	Rutter
Dong xi yang kao 東西洋考	Zhang Xie 張燮	1618	Textual study
Selden Map		*c.*1624	Map
Zhi nan zheng fa 指南正法		Late 17th century	Rutter
Pi hai ji you 裨海紀遊	Yu Yonghe 郁永河	1697	Textual study
Shi Shipiao's Map		*c.*1711–21	Map
Hai guo wen jian lu 海國聞見錄	Chen Lunjiong 陳倫炯	1730	Textual study

on Southeast Asia. Collecting information directly from mariners seems to have been an approach pioneered by the scholar Huang Zhong in his *Hai yu*.[19] The *Hai yu,* published in 1536, is a very short work that covers only Siam and Melaka in detail. Its novelty though was that the author, according to his preface, interviewed Chinese mariners rather than relying on older works.[20] The advantage of this approach is quite apparent even in Huang's short text. Its description of Melaka ends with an account of an attack on the city by the Portuguese (the Folangji 佛朗機, or Franks), which occurred in 1511, just 25 years before. The basic fact of Melaka's capture was also known by the Ming court within a decade or so after it occurred, but Huang's account is far more detailed than the one preserved in the *Ming shi lu* 明實錄.[21]

Huang does not include specific names or dates, but his general outline is quite precise. He recounts an initial attempt by Portuguese ships to trade at Melaka that ended in the imprisonment of several men, followed by another Portuguese fleet's capture of the town. He ends by saying that after the Portuguese looted the town, they departed and the Melakan sultan returned. This claim is not quite accurate of course, but Huang may have been extrapolating from information he had collected concerning the aftermath of the city's capture. The Portuguese did not depart, but their commander, Afonso de Albuquerque, did return to India the following year, and although Mahmud, Melaka's former sultan, never did recover his city, he made several attempts to do so and established a new residence near the city in 1518.[22]

19 Huang, *Hai yu*.

20 Elke Papelitzky has recently published an extremely useful study of Huang's work. See E. Papelitzky, 'Editing, circulating, and reading Huang Zhong's *Hai yu* 海語: A case study in the history of reading and the circulation of knowledge in Ming and Qing China', *Ming Qing yanjiu* 23, 1 (2019): 1–38.

21 *Ming shi Wuzong lu* 明實武宗錄 [Veritable records of Ming Wuzong], *juan* 卷194, p. 3628, http://hanchi.ihp.sinica.edu.tw/mql/login.html (last accessed 20 June 2021).

22 Leonard Y. Andaya, *The kingdom of Johor* (Oxford: Oxford University Press, 1975), p. 23; and I.A. Macgregor, 'Johore Lama in the sixteenth century', *Journal of the Malayan Branch of the Royal Asiatic*

Although the *Hai yu* was read and cited throughout the remainder of the sixteenth century,[23] no author appears to have adopted Huang's approach to geographic research on Southeast Asia until about eighty years later. Huang's lack of followers may have been in part the result of changes to the trading system beginning around the time of his book's publication. Huang's home district and the centre for his research was Guangdong's Nanhai County 南海縣.[24] Most of the mariners and merchants he met were likely those who had accompanied tribute embassies coming to Guangzhou, and by his lifetime the tributary trading system had already begun to decline. This fact helps explain the limited geographic scope of his book and lack of any immediate follow-up scholarship using his approach.[25] The centre of China's maritime trade was shifting towards southern Fujian, and unlike Guangzhou's trade with merchants who had come with tribute embassies, the mid-sixteenth century maritime trade through Fujian was primarily a smuggling business. Smugglers would naturally have been harder to recruit as informants for another project like Huang's, so this was probably why it was not until after the partial lifting of the prohibition in 1567 that Fujianese merchants began contributing to China's knowledge of Southeast Asia.[26]

The author who became Huang Zhong's truest successor was the Fujianese scholar Zhang Xie, although he does not seem to have consulted Huang's book. Zhang's work, the famous 1618 *Dong xi yang kao*, was unsurpassed until the nineteenth century in its breadth, accuracy, and the currentness of its information on Southeast Asia. Zhang made use of older sources, but like the *Hai yu*, the real value of the *Dong xi yang kao* comes from the information Zhang personally gathered from mariners.[27] Zhang uses this information to write in detail about virtually all of Southeast Asia, from Luzon to Timor in the east and from the Vietnamese Trinh domain to Aceh in Sumatra in the west. Most impressive is the information it provides on the political geography of the parts of Southeast Asia that had very little formal contact with Ming China through tribute embassies, particularly the Indonesian archipelago east of western Java.

A few examples will suffice to demonstrate this. The clearest ones are the instances related to the presence of Europeans in Southeast Asia because of the detailed records they left that can be used for comparison and verification. One of

Society 28, 2 (1955): 73–4. We wish to express our appreciation to the second anonymous reviewer of this article for pointing out why Huang may have believed that Mahmud had retaken the city.

23 See Papelitzky, 'Editing, circulating, and reading'.

24 Ruan Yuan 阮元, ed., (Daoguang) *Guangdong tong zhi* （道光）廣東通志 [(Daoguang era) Guangdong provincial gazetteer] [1822], *juan* 卷 276.

25 Gakusho Nakajima, 'The structure and transformation of the Ming tribute trade system', in *Global history and new polycentric approaches: Europe, Asia and the Americas in a world network system*, ed. Manuel Perez Garcia and Lucio De Sousa (Singapore: Palgrave Macmillan, 2018), pp. 148–9; and Ptak, *China, the Portuguese, and the Nanyang*, chap. 1, pp. 177–82.

26 See Igawa Kenji, 'The concrete image of the smuggling trade in sixteenth-century East Asia', in *Tribute, trade and smuggling: Commercial, scientific and human interaction in the middle period and early modern world*, ed. Angela Schottenhammer (Wiesbaden: Harrassowitz, 2014); and Pin-tsun Chang, 'Chinese maritime trade: The case of sixteenth-century Fu-chien (Fukien)' (PhD diss., Princeton University, 1983).

27 See Zhang's introduction. Zhang, *Dong xi yang kao*, pp. 19–20.

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

the most impressive passages is Zhang's account of the Spanish–Dutch conflict in the distant Maluku Islands, which had begun in 1606. Though Zhang does not seem to have had a clear understanding of the rival monarchies of Tidore and Ternate, he did understand the European presence, as he accurately describes how both the Dutch and Spanish occupied ports on Ternate (Wanlaogao shan 萬老高山).[28] In the part of his book devoted to the 'needle routes' (*zhen lu* 針路) that give directions for Chinese ships sailing across Southeast Asia, Zhang also notes that the island of Solor (Sulu shan 蘇律山) on the route to Timor was occupied by the Dutch (whom he calls red-haired foreigners, *hong mao yi* 紅毛夷, in this section). The Dutch took the island from the Portuguese in 1613, so in this case Zhang's information is current to within five years.[29]

Zhang's knowledge of the political situations in different parts of Asia was not limited to the activity of Europeans. In the case of eastern Java, a subregion that his followers in the early Qing dynasty seem to have had very little knowledge of, he apparently had access to rumours concerning the political and religious situation. Zhang describes a region called Sijigang 思吉港, which he says is an error for Sujidan 蘇吉丹. This probably refers to Surabaya, which at the beginning of the seventeenth century was the most powerful state on Java's northeastern coast.[30] Zhang states that the main settlement was an inland centre called Jilishi 吉力石, and that the city had a ruler who was over a hundred years old and who was capable of knowing fate ('*neng zhi ji xiong* 能知吉凶').[31] This passage almost certainly refers to the settlement of Giri and its priestly ruler, the Sunan Giri, who, though not the lord of Surabaya, still had enormous spiritual authority in the region.[32]

The other aspect of Zhang's book that demonstrates the breadth of his knowledge of Southeast Asia are the aforementioned needle routes. These routes describe the paths that Chinese ships would take from China's coast to different parts of the region. Zhang's routes are similar in their scope to those in the probably roughly contemporary Chinese rutter *Shun feng xiang song*, discussed in more detail below. Zhang gives routes from China's coast to destinations as far away as Aceh, eastward across the Indonesian archipelago as far as Timor, and to Brunei, the Sulu Islands, and the Maluku Islands.[33] Precise landmarks are noted in each case, and in some instances information about the landmark is given, such as the Dutch occupation of Solor mentioned above. Especially in the case of the routes in the eastern Indonesian archipelago, the coverage of the *Dong xi yang kao* was far broader than that of its counterparts written in the early Qing period (see fig. 1), as the following section will attempt to show.

28 Zhang, *Dong xi yang kao*, p. 101. For background on the conflict in the Maluku Islands, see Leonard Y. Andaya, *The world of Maluku: Eastern Indonesia in the early modern period* (Honolulu: University of Hawai'i Press, 1993), pp. 152–4.

29 Zhang, *Dong xi yang kao*, p. 181. See Hans Hägerdal, *Lords of the land, lords of the sea: Conflict and adaptation in early colonial Timor, 1600–1800* (Leiden: KITLV Press, 2012), p. 36; and Arend de Roever, *De Jacht op sandelhout: De VOC en de tweedeling van Timor in de zeventiende eeuw* (Zutphen: Walburg Pers, 2002), p. 121.

30 M.C. Ricklefs, *A history of modern Indonesia since* c.*1200* (Houndmills: Palgrave, 2001), pp. 47–8.

31 Zhang, *Dong xi yang kao*, p. 83.

32 Ricklefs, *A history of modern Indonesia*, p. 45.

33 Mills, 'Chinese navigators', p. 79.

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

Figure 1. ***Dong xi yang kao*** **東西洋考, 1618**

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

Early Qing geographies, 1684–1740

Twenty-six years after Zhang's *Dong xi yang kao* was published, the Ming dynasty collapsed and China was invaded by the armies of the new Manchu Qing state. A period of intermittent warfare lasting from 1644 to 1684 followed, during which the Qing attempted to block private trade between China and the rest of maritime Asia. Thanks to persistent resistance from the maritime-mercantile Zheng 鄭 family, the Qing state was mostly unsuccessful at preventing maritime trade, but its illegality does seem to have brought a temporary halt to research and writing on Southeast Asia within China. It was only after the Zheng regime's base on Taiwan was occupied in 1683 and the Qing government legalised maritime trade the following year that new writing on Southeast Asia began to appear.[34]

At least two Qing-era scholars interested in Southeast Asia after 1684 willingly adopted the approach used by their Ming predecessors, Huang Zhong and Zhang Xie. They took advantage of the rapid growth in commercial traffic between China and Southeast Asia and set about interviewing mariners who had visited Southeast Asian ports. However, none of them came close to achieving the breadth of detail that the *Dong xi yang kao* had. The important ports and states relatively close to China, such as Spanish Luzon, the two Vietnamese domains, and Siam were well described, and some of the important more distant ports, including Batavia, Johor, Melaka, and Banjarmasin, were at least mentioned, but other areas, especially the eastern Indonesian archipelago, seem to have been practically unknown to early Qing authors.

The first post-1684 book written by a private scholar that attempts something approaching a comprehensive overview of contemporary Southeast Asia is Yu Yonghe's 1697 *Pi hai ji you*. The *Pi hai ji you* is primarily an account of Yu's travels in Taiwan, but his work also includes several appendices on other topics. The last of these he titles rather grandly 'Yu nei xing shi' 宇內形勢 (The terrain within the universe). Within it, he describes the geography of a number of Southeast Asian countries, as well as Japan, Korea, the Ryukyu Islands, the Netherlands, and England, arranging them along simplified sailing routes. To explain the source of his information, he states, 'The above countries are all visited by merchant ships coming and going to trade, [so] their terrain, routes, scenery, people, and products can all be well-known.' Yu does not cite any older works in regards to Southeast Asia, so it was evidently the mariners aboard these merchant ships who supplied him with his information.[35]

For some of the locations he discusses, Yu's informants served him well. For example, he correctly states that in Aceh women could succeed to the throne and at the time he was writing there was indeed a female ruler in power.[36] He also recognises that the most important change to the geopolitical landscape of Southeast Asia since the days of Zhang Xie was the rising power of the Dutch VOC. His

34 There are many studies of the Zheng family, but the best is probably Cheng Wei-chung, *War, trade and piracy in the China seas, 1622–1683* (Leiden: Brill, 2013).

35 Yu, *Pi hai ji you*.

36 Ibid., p. 71. Four women ruled Aceh successively from 1641 to 1699. See Sher Banu A.L. Khan, *Sovereign women in a Muslim kingdom: The sultanahs of Aceh, 1641–1699* (Ithaca, NY: SEAP Publications, Cornell University, 2017).

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

understanding of how the VOC's commercial empire operated is limited; he accuses the Dutch of being primarily pirates.[37] However, he does correctly describe how the VOC had occupied the port of Jakarta (Yaoliuba 咬嘮吧), which they renamed Batavia, on the island of Java.[38]

There are some gaping omissions and mistakes in the *Pi hai ji you*'s descriptions of Southeast Asia though (see fig. 2). The mistakes are mainly the relative geographic locations of different ports. Yu thinks Banten (Wandan 萬丹) and Banjarmasin (Mashen 馬神) were south of Batavia for example. The *Pi hai ji you*'s coverage of the region is also severely limited. In the eastern part of Southeast Asia, the major ports that Yu lists are Luzon (meaning Manila), the Sulu Islands (Sulu 蘇祿), and Brunei (Wenlai 文萊). He makes no mention of the Maluku Islands, which in the *Dong xi yang kao* had been the furthest destination along the eastern routes, or any of the Philippine Islands south of Mindoro. For the western route the *Pi hai ji you* includes both Vietnamese domains, Cambodia, Siam, Ligor (Liukun 六昆), Pattani (Danian 大年), Johor (Roufo 柔佛), Melaka, Aceh, Banten, Banjarmasin, and Batavia. However, east of Batavia no ports in Java or the Lesser Sunda Islands are mentioned at all.

The section of Yu's work that discusses Southeast Asia is just a short appendix and when he wrote it in the mid-1690s the new Qing maritime trading network had only just begun to develop. From the late 1690s until the late 1710s, the Chinese trading network in the region appears to have matured and expanded in terms of the volume of trade.[39] Unfortunately no surviving studies of Southeast Asia were written in China during these two decades. Between 1717 and 1722, there was a short hiatus in trade because of a ban the Kangxi emperor placed on China-based merchant vessels trading with Southeast Asia. After the emperor's death in 1722, the ban remained officially in place for another five years, but was not rigorously enforced, allowing Chinese ships to return to Southeast Asian ports.[40]

In 1730, three years after the ban on trade with Southeast Asia was officially lifted, the military official Chen Lunjiong completed the *Hai guo wen jian lu*. Chen claims that his investigation is based on accounts given to him by his father, who had also been a military official involved in coastal defence, a map that the Kangxi emperor had shown him, and information collected from interviews with mariners during his time stationed in Taiwan and Guangdong.[41] His book describes the coast of China, as well as countries and ports in maritime East Asia, Southeast Asia, the Indian Ocean, and the Atlantic Ocean (primarily Europe). The sections describing Southeast Asia are considerably fuller than those in the *Pi hai ji you*.

37 Ibid., pp. 64–5.
38 Ibid., p. 72.
39 See Leonard Blussé, *Strange company: Chinese settlers, mestizo women, and the Dutch in VOC Batavia* (Dordrecht: Foris, 1988), pp. 97–155; and Ryan Holroyd, 'The rebirth of China's intra-Asian maritime trade, 1670–1740' (PhD diss., Pennsylvania State University, 2018), pp. 69–141.
40 See Gang Zhao, *The Qing opening to the ocean: Chinese maritime policies, 1684–1757* (Honolulu: University of Hawai'i Press, 2013), pp. 153–68; and Guo Chengkang 郭成康, 'Kang qian zhi ji jin Nan Yang an tan xi 康乾之際禁南洋案探析' [An analysis of the South Sea prohibitions between the Kangxi and Qianlong periods: Re-examining how regional interests influenced central decision making], *Zhong guo she hui ke xue* 中國社會科學 1 (1997): 184–97.
41 Chen, *Hai guo wen jian lu*, pp. 1–2.

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Figure 2. ***Pi hai ji you*** **裨海紀遊, 1697**

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The strongest parts of Chen's descriptions of Southeast Asia are within his section on the region's eastern half (the '*dong nan yang*' 東南洋 in the section's title), which includes today's Philippine Islands, Borneo, and some of the smaller islands around them. However, there is an obvious unevenness to the level of detail that he provides. Like the *Dong xi yang kao*, the *Hai guo wen jian lu* begins with Luzon and offers a long account of its Spanish government. Then the text moves on to briefly mention Lucena (Lizaifa 利仔發), Camarines Sur (Qimali 其馬力), and a number of other places farther south within the Philippine Islands. Chen only mentions that each of the places was connected economically to Luzon by Chinese merchant residents of Manila and that there was a demand for cloth in their markets.[42] In the case of Borneo and the islands closest to it, the book also identifies a number of destinations for Chinese ships, including the Sulu Islands, Brunei, Sukadanda (Zhugejiaola 朱葛礁喇), Banjarmasin, an unidentified place called 'Jiliwen 吉里問' somewhere to the east of Brunei in northern Borneo, and Sulawesi (Mangjiashi da shan 芒佳虱大山). However, the only one of these that Chen describes in detail is Banjarmasin, recounting the VOC's attempts to control the harbour and the gem trade there.[43] Similarly, although Chen mentions the Maluku Islands of Ternate (Wanlaogao 萬老高) and Dingjiyi 丁機宜 (probably Tidore), he says only that they were similar to the Philippine Islands. He does not mention the VOC's presence or the islands' connection with spice production and distribution.

In the western half of Southeast Asia (the '*nan yang*' 南洋), Chen does not offer much more than Yu, and significantly less than Zhang in terms of his coverage. The *Hai guo wen jian lu* includes long descriptions of the Vietnamese domains, Siam, and some of the surrounding states. Some details on the current political situations are offered, notably the struggle between Siam and the Nguyen domain in central Vietnam for influence over Cambodia.[44] For locations further south though, Chen apparently had less luck gathering information. He gives a list of Malay port cities, but offers no more than a blanket statement claiming that they were all tributaries of Siam, a list of their trade goods, and an unfavourable evaluation of their level of cultural attainment.[45]

In the Straits of Melaka, Johor, Melaka, and Aceh all get a few sentences, but only Johor's seems to be reasonably accurate. Chen tells us that trade goods were more abundant in Johor than elsewhere in the Malay Peninsula and that the port could support three or four large ships per year. However, Chen confuses the political status of Melaka and Aceh, claiming that the former was independent while the latter was occupied by the Dutch. He goes on to mention Bengkulu (Wangulu 萬古屢) on the west coast of Sumatra, but only to say that it is southeast of Aceh. He also mentions Banten and a port called Xiagang 下港, which probably refers to Palembang, but the only information that the reader receives is that both places produced pepper.[46] For comparison, besides Aceh, Melaka, and Johor, the *Dong*

42 Ibid., pp. 12–13.
43 Ibid., pp. 13–14.
44 Ibid., p. 16.
45 Ibid., p. 20.
46 Ibid.

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

xi yang kao includes full sections on Banten, Palembang (舊港), and Indragiri (Dingjiyi 丁機宜).[47]

Batavia is the final place in Southeast Asia to receive a significant amount of description; Chen writes about the city's Dutch castle and harbour, its importance as a trade hub, and its large Chinese population. The most historically current piece of information his book gives regarding the city is that the VOC was attempting to stem the flood of new Chinese immigrants landing in Batavia, which tragically foreshadowed the rebellion of the Chinese in Java and the massacre of Batavia's Chinese population in 1740.[48] East of Batavia in the Indonesian archipelago, only Timor (Chiwen 池問) is identified, and the text only tells the reader that it produced pepper and sandalwood. As well, no sailing routes for Timor or anywhere else among the Lesser Sunda Islands are supplied.

Thus, as valuable as the *Hai guo wen jian lu* is for the information it contains on the politics and societies of some parts of Southeast Asia, its content is inferior to the *Dong xi yang kao*'s portrait of the region in the early seventeenth century. Like the *Dong xi yang kao*, the *Hai guo wen jian lu* introduces the reader to major trading regions close to China, including the Vietnamese domains, Siam, and Luzon. It also gives the reader some detailed information on Batavia and Banjarmasin, which became important destinations for Chinese ships in the seventeenth century (see fig. 3). However, where the *Dong xi yang kao* was able to describe the beginnings of the VOC's attempt at becoming a maritime hegemon within the Indonesian archipelago by pointing to some of its earliest establishments in the Maluku and Lesser Sunda Islands, the *Hai guo wen jian lu* leaves these areas of the region almost unacknowledged, offering only slightly more information than Yu Yonghe's short section in the *Pi hai ji you*.

Other types of sources on Southeast Asian geography

The difference between the late Ming and early Qing trading systems is also evident when the scholarly studies discussed above are compared to the contents of contemporary navigational sources. Two obvious types of these sources are available for this discussion, rutters and maps. The present study will begin with the two famous rutters, the late Ming *Shun feng xiang song* and the early Qing *Zhi nan zheng fa*, both held by the Bodleian Libraries of the University of Oxford.[49]

Unlike the scholarly studies, the rutters were not produced by writers recording information for the benefit of the reading public; rather they were navigational aids probably created by mariners themselves to guide their ships across Asia's seas. Both rutters have been extensively studied, but there has been little discussion of the reasons behind the difference in their respective scopes.[50]A graphic comparison

47 Zhang, *Dong xi yang kao*, pp. 41–8, 59–83.

48 Chen, *Hai guo wen jian lu*, p. 20. See Blussé, *Strange company*, pp. 127–8.

49 The contents of both rutters have been published in a number of different books, but their original publication by Xiang Da, who discovered them in the Bodleian Libraries, is still the most accessible. Xiang Da 向達, ed., *Liang zhong hai dao zhen jing* 兩種海道針經 [Two maritime rutters] (Beijing: Zhong hua shu ju, 1961).

50 See for example, Liu Yijie 劉義傑, Shun feng xiang song *yan jiu* 《順風相送》 研究 [*Shun feng xiang song* research] (Dalian: Dalian hai shi da xue chu ban she, 2017).

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Figure 3. ***Hai guo wen jian lu*** **海國聞見錄, 1730**

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

between the contents of the two rutters, accomplished by mapping out the routes they describe in their texts, quickly reveals that they follow the same pattern as the scholarly studies. The *Shun feng xiang song*, which appears to have been compiled in the late sixteenth century or the beginning of the seventeenth,[51] presents a map of the trading routes across Southeast Asia that looks much like that given by Zhang's *Dong xi yang kao* (compare fig. 1 above with fig. 4 below). In the east, it guides the navigator first to Luzon. From there, the text offers further routes to take him onto Brunei, the Sulu Islands, and Mindanao.[52] Curiously, the Maluku Islands, which are included in most of the other sources discussed here, are absent in the *Shun feng xiang song*. In the west, it includes detailed routes from China's coast to Aceh, two ports in western Sumatra,[53] and several places in the Indian Ocean beyond. For central and eastern Java and the Lesser Sunda Islands, it gives the navigator two options. They may sail south from China along the coast of modern Vietnam, across the mouth of the Gulf of Thailand to Pulo (Pulau) Tioman, and then to Banten, from where ships could set out eastward along Java's northern coast to Cirebon, Demak, and Tuban. The second option is to sail south from the coast of modern Vietnam to western Borneo, then follow its coast southward, cross the Java Sea, and arrive at Tuban. Beyond Tuban, the route continues to nearby Gresik in eastern Java and as far as Timor.

The *Shun feng xiang song*'s Qing-era counterpart, the *Zhi nan zheng fa*, describes a far less extensive trading system. This may have been in part because its compilation probably occurred in the late seventeenth century, making it a product of the early years of the new trading system, similar to the *Pi hai ji you*.[54] However, the overall shape of the trading system in Southeast Asia that it provides looks much like the descriptions in both the *Pi hai ji you* and *Hai guo wen jian lu*. Once again, the eastern sailing routes are more complete than the western ones. The rutter leads ships past Luzon to Brunei, the Sulu Islands, Mindanao (Wangjinjiaolao 綱巾礁老), and the Maluku Islands. The western routes in the *Zhi nan zheng fa* (fig. 5) are again stunted compared to those described in the *Shun feng xiang song* (fig. 4) and the *Dong xi yang kao* (fig. 1). The rutter offers routes to Vietnamese harbours, Cambodia (meaning the Mekong Delta), Siam, and various ports along the eastern coast of the Malay Peninsula. Further south though, the rutter's compiler only bothered to include three destinations, Melaka, Palembang, and Batavia. Johor is not mentioned at all, suggesting that the work may have been completed during the late 1680s when that sultanate was in political chaos.[55] Banjarmasin is also absent, and no other place in Borneo is included, save Brunei.

51 Liu, Shun feng xiang song *yan jiu*, p. 40; and Chen Jiarong 陳佳榮, Shun feng xiang song *zuo zhe ji wan cheng nian dai xin kao* 《順風相送》 作者及完成年代新考 [Notes on the Shun-feng Xiang-song (Fair winds for escort) with a focus on its author and compilation] in 'Nan ming wang 南溟網'.

52 J.V. Mills believes that the *Shun feng xiang song* had a route beyond the Sulu Islands to some unidentifiable harbour in northern Sulawesi. Mills, 'Chinese navigators', p. 79.

53 Mills identifies the two ports as Barus (Maolu 貓律) and Pariaman (Jializiman 加里仔蠻). Ibid., p. 71.

54 On the dating of the *Zhi nan zheng fa*, see Chen Jiarong 陳佳榮, '*Zhi nan zheng fa* Wan cheng nian dais hang xian xin zheng 《指南正法》 完成年代上限新證' [New proof of the upper limit on the date of the Zhi nan *zheng fa's* final compilation], in 'Nan ming wang 南溟網', http://www.world10k.com/blog/?p=2379 (last accessed 20 June 2021).

55 Andaya, *Kingdom of Johor*, pp. 179–80.

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

Figure 4. *Shun feng xiang song* 順風相送, late 16th to early 17th century

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

Figure 5. *Zhi nan zheng fa* 指南正法, late 17th century

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Maps that trace shipping lanes are the other type of source on Southeast Asian geography that lend themselves to a comparison with the scholarly studies. In the late Ming period the most obvious candidate is the famous Selden Map, which was rediscovered in the Bodleian Libraries in 2008.[56] Historians have already studied the map extensively, and from their work we know that it entered the library in 1659, and was probably created around 1624, making it a close contemporary of the *Dong xi yang kao*.[57] The map does not fit perfectly into the analysis of the current article because unlike the other sources it was likely produced somewhere in Southeast Asia, perhaps Aceh, rather than in China.[58] However, the cartographer was still probably from southern Fujian, and was probably affiliated with some part of the late Ming dynasty's maritime merchant community.[59] If he was, he would have come from the same class of people as Zhang Xie's informants and likely the compiler of the *Shun feng xiang song* as well.

The cartographer of the Selden Map traced a series of sailing routes onto the map that all begin in southern Fujian or Guangdong, much like all the other sources. However, perhaps because he was based in Southeast Asia and may have had access to European maps, his vision of the Southeast Asian trading system was in some respects more complete than the other Ming sources as our modern remapping of locations and sailing routes in fig. 6 demonstrates. For the eastern part of Southeast Asia, the Selden Map shows the same pattern of routes connecting Manila to a number of other places within the Philippine Islands, to Brunei, to the Sulu Islands, and to Mindanao. The most southern destination in the east is Ternate once again, and like the *Dong xi yang kao*, the map recognises the presence of the VOC; on the island there is a circle labelled '*hong mao zhu* 紅毛住' ('controlled by the red-haired ones'). Along the western routes the map includes a number of locations in central and eastern Java and in the Lesser Sunda Islands, including Tuban (Zhuman 豬蠻), Gresik (Raodong 饒洞), Bali (Mali 磨厘), and Timor (Chiwen池汶). However, it also includes a sailing route not present in either the *Dong xi yang kao* or *Shun feng xiang song*. The route begins in Banjarmasin and heads eastward, connecting Makassar (Bangjiashi 傍伽虱), Kota Ambon (Anwen 唵汶), and Banda (Yuandan 援丹).

The Selden Map's early Qing counterparts were two very similar maps of Southeast Asia that were created in the late Kangxi reign. These maps were commissioned by the Qing officials Shi Shipiao 施世驃, the Fujian *shui shi ti du* 福建水師提督 (Fujian naval commander), and Gioro Manbo 覺羅滿保, the Fujian *xun fu* 福建巡撫 (Fujian governor). The precise dates of their creation are unknown, but the officials submitted them to the Kangxi emperor sometime between 1711 and 1721. Both maps have labelled place names, but Shi's includes lines connecting port cities that represent trade routes just as the Selden Map does.[60] When Shi's map's locations and sailing

56 See Robert K. Batchelor, *London: The Selden Map and the making of a global city, 1549–1689* (Chicago: University of Chicago Press, 2014); and Brook, *Mr. Selden's map of China*.

57 Chen, 'Ming wei jiang li'.

58 Sotiria Kogou et al., 'The origins of the Selden Map of China: Scientific analysis of the painting materials and techniques using a holistic approach', *Heritage Science* 4, 28 (2016).

59 Zhou Yunzhong 周運中, 'Ying cang Ming mo Min shang hang hai tu chu zi Xiamen wan 英藏明末閩商航海圖出自廈門灣' [The author of the Selden Map was from Xiamen Bay], in Jiao, *Ming dai hai yang mao yi*.

60 The current authors have not been able to examine the original copies of these maps, which are held

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Figure 6. Selden Map of China, early 17th century

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routes are remapped, the geographic extent of the trading system it depicts looks much like that of all the other Qing-era sources discussed here (fig. 7). The eastern routes take trade ships to Manila, Brunei, the Sulu Islands, and Cebu. Ternate is marked on the map, but, unlike the *Hai guo wen jian lu* and the *Zhi nan zheng fa*, there is no sailing route to the Maluku Islands. Along the western routes, the destinations are the two Vietnamese domains, Siam, Chaiya, Ligor, Songkhla, Pattani, Trengganu, Pahang, Johor, Melaka, Palembang, Batavia, and Banjarmasin. No route goes farther eastward in the Indonesian archipelago than Batavia, and the Lesser Sunda Islands, along with eastern Java, have been cropped out of the map altogether.

Shi Shipao's and Gioro Manbo's maps do however show a greater awareness of the basic geography of the Indonesian archipelago than any previous Qing-era work. For example, three cities on the north-central coast of Java, Cirebon (Jingliwen 井里問), Jepara (Erbona 二泊那), and Semarang (Sanbalong 三把籠), are identified on the maps. So are a number of smaller centres in Borneo, and the island of Sulawesi (Mangjiashi da shan 芒加虱大山, meaning 'Makassar Island') is included as well. However, none of these locations are connected to the trade routes that the map's creator traced between China and the ports listed above.

The trading worlds of Southeast Asia

Why were these early Qing studies, rutters, and maps so geographically uneven in their coverage of Southeast Asia compared to their late Ming counterparts? Yu's *Pi hai ji you* was just a brief appendix, and was written only a decade or so after the Qing dynasty's legalisation of maritime trade. We can speculate that because the trading system was still developing, in the 1690s Yu had difficulty finding informants who had travelled to the farthest reaches of the region. The *Zhi nan zheng fa* appears to have been compiled around the same time as the *Pi hai ji you*, and thus may also reflect the trading system in its infancy. However, by 1730 when Chen completed the *Hai guo wen jian lu*, the new Qing Chinese trading network in Southeast Asia had been operating for almost half a century, excluding the brief hiatus caused by the trade ban late in the Kangxi emperor's reign. Had Chen done his research in southern Fujian (as Zhang had), he might have had a larger pool of informants to draw upon because Xiamen was then the main port for Chinese merchant ships that sailed to Southeast Asia. However, he was stationed in coastal Taiwan and Guangdong when he collected his information, and both places were well integrated into the Xiamen-centred coastal trading network, so finding informants should still not have been that difficult. He did, after all, manage to collect extensive descriptions of Luzon, Siam, and the two Vietnamese domains, and had current information regarding Batavia and Banjarmasin. Shi Shipiao, as the Fujian *shui shi ti du*, was

in the First Historical Archives of China 中國第一歷史檔案館 in Beijing. Reproductions of both maps have been published in *Aomen li shi di tu jing xuan* 澳門歷史地圖精選 [Selected historical maps of Macao] (Beijing: Hua wen chu ban she, 2000), pp. 34, 38. Chen Jiarong has transcribed the text on Shi's map in two different books, and the discussion here is based on these reproductions. Chen Jiarong 陳佳榮 and Zhu Jianqiu 朱鑒秋, ed., *Zhongguo li dai hail lu zhen jing* 中國歷代海路針經 [A collection of maritime routes and rutters of imperial China] (Guangzhou: Guangdong ke ji chu ban she), vol. 1, pp. 501–4; and Zhu Jianqiu 朱鑒秋, Chen Jiarong 陳佳榮, Qian Jiang 錢江 and Tan Guanglian 譚廣濂, eds, *Zhong wai jiao tong gu di tu ji* 中外交通古地圖集 [A collection of ancient maps related to Sino–foreign interaction] (Shanghai: Zhong xi shu ju, 2017), pp. 227–9.

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Figure 7. Shi Shipao's map, *c.*1711–21

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

stationed in Xiamen, and as the province's most senior naval commander he would have been in an even better position to help his anonymous cartographer collect the most current information available from Chinese mariners.

The most probable explanation for the comparative weakness of the Qing sources is that the trading systems that existed at the beginning of the seventeenth century differed substantially from the one that emerged in the early Qing dynasty. The most visible change was the VOC's much larger presence in Southeast Asia at the end of the century. In Zhang Xie's time, the Dutch company had only just begun to penetrate some Southeast Asian markets, and were only a factor for Chinese merchants in a handful of places in the eastern peninsula. By the end of the century the company had established a new headquarters, in Batavia, Java, and had gained suzerainty or direct control over many of the formerly important port centres in the Indonesian archipelago, including Melaka, Makassar, Semarang, Cirebon, and Banten.[61]

The rise of the company's power probably had the greatest impact on Chinese trade on the route that followed the southern littoral of the Java Sea, running eastward from Banten or Batavia along the northern coast of Java's *pasisir* and the Lesser Sunda Islands and usually terminating in Timor. This route, which was also described by Portuguese merchants in the sixteenth century, was a prominent feature of the late-Ming *Dong xi yang kao, Shun feng xiang song*, and Selden Map.[62] The company's wars in eastern Java during the 1670s and 1680s ended up giving the company control over trade in most of the *pasisir*'s important ports just before the Qing government lifted its prohibition on maritime trade. The company's goal was to channel long-distance trade towards Batavia, and consequently the *pasisir* ports to the east were no longer viable destinations for ships sailing directly from China.[63] Chinese immigrants to Java who settled in the *pasisir*'s ports gradually became important participants in commerce within the archipelago, but they did not directly take part in the trade between Southeast Asia and China.[64] Chinese immigrants and sojourners in central and eastern Java were likely the indirect source of information that Shi Shipiao's cartographer used to add Cirebon, Jepara, and Semarang to his map, but

61 For an introduction to the VOC's establishment, see Robert Parthesius, *The development of the Dutch East India Company (VOC) shipping network in Asia, 1595–1660* (Amsterdam: Amsterdam University Press, 2010), esp. pp. 31–49. For the expansion of the VOC's power in Java, see M.C. Ricklefs, *War, culture and economy in Java, 1677–1726: Asian and European imperialism in the early Kartasura period* (Sydney: Allen & Unwin, 1993). The classic work on sixteenth and early seventeenth-century Southeast Asian maritime trade is M.A.P. Meilink-Roelofsz, *Asian trade and European influence in the Indonesian archipelago between 1500 and about 1630* (The Hague: Martinus Nijhoff, 1962). See the tenth chapter for an overview of the company's effect on the trading system in the central and eastern archipelago.

62 For the Portuguese descriptions of the route, see Gaynor, *Intertidal history*, p. 36.

63 See Gerrit Knaap, *Shallow waters, rising tide: Shipping and trade in Java* (Leiden: KITLV Press, 1996), p. 16; Leonard Blussé, 'Chinese trade to Batavia during the days of the V.O.C.', *Archipel* 18 (1979): 197; and Luc Nagtegaal, *Riding the Dutch tiger: The Dutch East Indies Company and the northeast coast of Java, 1680–1743*, trans. Beverly Jackson (Leiden: KITLV Press, 1996), pp. 120–22.

64 Kwee Hui Kian, 'The expansion of Chinese inter-insular and hinterland trade in Southeast Asia, c.1400–1850', in *Environment, trade and society in Southeast Asia: A longue durée perspective*, ed. David Henley and Henk Schulte Nordholt (Leiden: Brill, 2015), p. 152; and Nagtegaal, *Riding the Dutch tiger*, pp. 119–20.

the lack of direct connections explains why the Java Sea's southern littoral route did not appear in any of the Qing-era sources discussed in this article.

The route running along the northern littoral of the Java Sea, from the southern coast of Borneo, past Sulawesi, and then onto the Maluku Islands, was the most important west–east branch of their trading network for the Chinese merchants in the Qing period. However, only the Selden Map and the *Hai guo wen jian lu* describe this sailing route continuing east of Borneo. The likely reason for the exclusion of this route from the other sources was that although it supplied valuable commodities from the eastern archipelago (spices, trepang, and sea turtle shell, among other things), the Chinese themselves rarely sailed it in either Ming or Qing times. Jennifer Gaynor's study of the Sama people in southern Sulawesi and their relationship with other groups highlights the role the Sama, Bugis, and Makassar peoples played in connecting the eastern Indonesian archipelago to transhipment points on Borneo beginning in the Ming dynasty.[65] In the early Qing period, the *Hai guo wen jian lu*'s relatively long description of Banjarmasin suggests that that riverine port had become the main hub for Chinese merchants seeking access to the northern Java Sea littoral trading system, which was still dominated by merchants based in southern Sulawesi.[66] Shi Shipiao's map and the *Pi hai ji you* also show the northern littoral route terminating in Banjarmasin, supporting the hypothesis that that port had become the most important node connecting the Chinese and eastern archipelago trading systems.

In the western part of Southeast Asia, the main discrepancy between the Ming and Qing sources was eastern Sumatra and the Straits of Melaka subregion. During the late Ming period, when Melaka was under Portuguese control, there was no single dominant trading centre; the Portuguese had intended to make Melaka the emporium of the entire subregion, but competition from neighbouring Johor, Banten, and Aceh prevented this.[67] The Portuguese also undermined their own position with unfavourable treatment of long-distance merchants. Some of these even began avoiding the Straits of Melaka by sailing through the Straits of Sunda and along the west coast of Sumatra,[68] and this is likely at least part of the reason that the Ming-era *Shun feng xiang song* uniquely includes two western Sumatran ports among its destinations (see fig. 4).

After 1641, when the VOC captured Melaka with help from its ally Johor, the situation began to change. The Dutch company wished to focus their Southeast Asian trading activity as much as possible on Batavia, so did not attempt to turn

65 Gaynor, *Intertidal history*, pp. 34–5.

66 This proposition is also supported by most modern scholarship on the region. See Leonard Y. Andaya, 'Local trade networks in Maluku in the 16th, 17th, and 18th centuries', *Cakalele* 2, 2 (1991): 78; and Heather Sutherland, 'Trepang and wangkang: The China trade of eighteenth-century Makassar, c.1720s–1840s', in *Authority and enterprise among the peoples of south Sulawesi*, ed. Roger Tol, Kees van Dijk and Greg Acciaioli (Leiden: KITLV Press, 2000), p. 78.

67 See Paulo Jorge de Sousa Pinto, *The Portuguese and the Straits of Melaka, 1575–1619: Power, trade and diplomacy* (Singapore: NUS Press, 2012), pp. 17–223; Dianne Lewis, *The Jan Compagnie in the Straits of Malacca, 1641–1795* (Athens: Center for International Studies, Ohio University, 1995), pp. 9–10; and Manuel Lobato, '"Melaka is like a cropping field": Trade management in the Strait of Melaka during the sultanate and the Portuguese period', *Journal of Asian History* 46, 2 (2012): 248–9.

68 Kathirithamby-Wells, 'Forces', p. 27. See also Ptak, 'Possible Chinese references to the Barus area (Tang to Ming)', in *China, the Portuguese, and the Nanyang*, chap. 10, pp. 119–47.

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

Melaka into a major emporium within its empire. However, Johor, which continued to act as the company's ally well into the eighteenth century, was allowed to develop as a trading hub largely without the company's interference. In fact the company facilitated Johor's ascent as the subregion's predominant commercial centre both by eliminating Banten as a competing trading centre in 1682 and by granting passes to Johor-based ships, allowing them to sail through the straits safe from harassment by company patrols.[69] This is likely why Chen Lunjiong, writing in the 1720s, was only able to offer reasonably accurate descriptions of Johor and Batavia and had little to say about anywhere else in the subregion.

Kathirithamby-Wells has described the other important factor in the consolidation of trade in Johor and other major ports in western Southeast Asia. By the mid-seventeenth century state integration and economic activity had intensified to the point where local rulers of small coastal or riverine centres that had previously served as collection points between production sites and the major subregional emporia were losing their control over trade. Merchants based in the emporia, such as Johor, Batavia, and (until 1682) Banten, were bypassing these smaller collection areas and transporting goods directly to their home ports.[70] This trend would have encouraged the consolidation of long-distance trade in Johor, and consequently smaller centres on the coast of Sumatra, such as Jambi and Indragiri, would have received far fewer visits from ships based in China, and consequently there would have been far less news available about the current state of these areas for Chen and other scholars who collected information about foreign countries.

Conclusion

This article has attempted to show how knowledge within China of Southeast Asia developed from the sixteenth century to the mid-eighteenth and why. The most basic finding is that the last decades of the Ming dynasty were a high point for Chinese scholarship on the region. Zhang Xie's 1618 *Dong xi yang kao* provided the most complete picture of contemporary Southeast Asia written in China since the time of the voyages of Zheng He in the early fifteenth century. The unique characteristic of Zhang's work was that it was neither the result of a state-sponsored voyage, as the works produced by the writers who had accompanied Zheng He were, or a geographically agnostic synthesis of older and foreign sources, as many other studies of foreign lands published in the Ming and Qing dynasty had been. The *Dong xi yang kao* follows the short but path-breaking work of Huang Zhong by relying primarily on the accounts of contemporary Chinese mariners for its information, and is therefore able to provide an array of facts about different ports that were current at the time of its composition.

After the collapse of the Ming dynasty in the mid-seventeenth century and the consolidation of the new Qing state from the 1640s to the 1680s, Chinese scholars

69 Andaya, *The kingdom of Johor*, pp. 39–40; and M.R. Fernando, 'Continuity and change in maritime trade in the Straits of Melaka in the seventeenth and eighteenth centuries', in *Trade, circulation, and flow in the Indian Ocean world*, ed. Michael Pearson (Houndmills: Palgrave, 2015), pp. 118–19.

70 Kathirithamby-Wells, 'Forces', pp. 42–3. See also Barbara Watson Andaya, *To live as brothers: Southeast Sumatra in the seventeenth and eighteenth centuries* (Honolulu: University of Hawai'i Press, 1993), pp. 122–3.

https://doi.org/10.1017/S0022463422000248 Published online by Cambridge University Press

began to write about Southeast Asia once again. Some, notably Yu Yonghe in the 1690s and Chen Lunjiong in the 1720s, followed the approach taken by Zhang and produced works based primarily on the observations of contemporary mariners. However, an examination of their writing shows that their descriptions of Southeast Asia were clearly less extensive than Zhang's had been. Many ports were excluded and some areas, especially eastern Java and the Lesser Sunda Islands, were altogether absent.

A reasonable objection to this comparison could be that because the sample size of extant geographic studies using information collected from mariners is so small, it might be that Yu and Chen were simply inferior scholars to Zhang. But when the other available geographic sources, namely rutters and maps, are examined, the same pattern appears in all of them. Ming-era sources describe a much broader geographic vision of Southeast Asia than their early Qing counterparts. In Indochina and the Philippine Islands, the coverage is broadly equal, but the Qing sources have little to say about anywhere in Java or the Lesser Sunda Islands east of Batavia. And in the Straits of Melaka and eastern Sumatra, Johor is identified as the most important centre while other ports are merely noted or are excluded altogether.

The article's final offering is a tentative explanation for the apparent dearth of information in the early Qing sources. The most obvious reason is that the Chinese trading system in Southeast Asia had changed. Because Yu and Chen were relying on interviews with mariners, they could only collect information about places ships were actually travelling to with sufficient regularity. But why were Chinese ships not sailing to anywhere on Java's *pasisir* or the ports in eastern Sumatra and the Straits of Melaka other than Johor?

In the case of the ports on Java east of Batavia and in the Lesser Sunda Islands, the Dutch VOC seems to have been mostly successful at persuading ships coming from China to stop in Batavia and sail no farther east. The Chinese merchants who wanted access to the eastern archipelago had the option of sailing to another port, Banjarmasin, though. In Banjarmasin, they were able to tap into the expanding trading systems of the Bugis and other groups from Sulawesi at this time, so there was likely no need to risk the Dutch company's ire by attempting to sail the route that ran along the southern littoral of the Java Sea.

In the case of the Straits of Melaka subregion, one possible explanation for the lower number of ports mentioned is Anthony Reid's claim that in about 1680 Southeast Asia's age of commerce came to an end, leading to a decline in engagement with international trade throughout the region. This claim may partly explain the smaller number of ports identified in Qing sources, but an even more compelling hypothesis has been offered by J. Kathirithamby-Wells, who argues that after the VOC's conquest of Melaka, state integration intensified and this resulted in the consolidation of control over the subregional trading network by merchants based in major emporia, allowing them to bypass smaller collection points. By the 1690s, it appears that most of the subregional trade in and around the southern end of the Straits of Melaka was dominated by merchants from Johor and Batavia, so these were the ports to which Chinese ships sailed.